

**MICROLEPIDOPTERA  
OF NEW GUINEA**  
RESULTS OF THE THIRD ARCHBOLD EXPEDITION  
(AMERICAN—NETHERLANDS INDIAN EXPEDITION 1938—1939)

**PART II**

BY

**A. DIAKONOFF**

*Rijksmuseum van Natuurlijke Historie, Leiden*

(WITH TEXT FIGURES 209—372)

VERHANDELINGEN DER KONINKLIJKE NEDERLANDSE  
AKADEMIE VAN WETENSCHAPPEN, AFD. NATUURKUNDE

TWEEDE REEKS, DEEL XLIX, No. 3



1953

NORTH-HOLLAND PUBLISHING COMPANY  
(N.V. Noord-Hollandsche Uitgevers Mij.)  
AMSTERDAM

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BIBLIOTHEEK

NATIONAAL NATUURHISTORISCH MUSEUM Postbus 9517 2300 RA Leiden Nederland

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*Publication of the present paper has been made possible  
by a grant of the "Nederlandse Organisatie voor Zuiver-  
Wetenschappelijk Onderzoek" covering a large part of  
the expenses for printing.*



This paper is the second part of a report on Microlepidoptera collected by the Third Archbold Expedition to the Netherlands New Guinea, 1938—1939. The first part was published in volume XLIX, no. 1, pp. 1—167, of the Second Series of these *Verhandelingen*.

In the present part descriptions and records of Tortricidae, Tortricinae are continued, and those of the subfamily Encosminae are presented; 13 genera and 106 species are described as new.

## TORTRICIDAE

(continued)

### Key to the Papuan genera of Tortricinae<sup>1)</sup>

1. Females with corethrogyne (fig. 24). . . . . 2  
     Females without corethrogyne . . . . . 5
2. Head smooth, corethrogyne large, ventro-lateral<sup>2)</sup> . . . *Zacorisca* MEYRICK  
     Head with appressed or rather roughish scales . . . . . 3
3. Corethrogyne small, ventral, eighth tergite swollen, forming a vesicle around ovipositor<sup>2)</sup>; head with long loose hairs, costal fold in male absent . . . .  
     . . . . . *Diphtheropyga* DIAKONOFF  
     Corethrogyne large, ventro-lateral or dorso-lateral, eighth tergite normal; head with appressed scales, costal fold in male always present . . . . . 4
4. Fore wing smooth-scaled, costa smooth; mostly white with black marginal markings or unicolorous whitish or yellowish; corethrogyne ventro-lateral, large, formed by fine hairs; diurnal species . . . . . *Chionoethremma* DIAKONOFF  
     Fore wing not smooth-scaled, costa in male ciliate posteriorly, in female ciliate throughout, often a larger tuft of cilia in middle; mostly whitish, retinate and suffused with fuscous or greyish, markings tortricoid, fuscous, grey or blackish; corethrogyne dorso-lateral, seldom ventro-lateral, formed by variably shaped scales, seldom by hairs; nocturnal species . . . . . *Isotenes* MEYRICK
5. Fore wing with veins 7 and 8 stalked . . . . . 6  
     Fore wing with veins 7 and 8 separate or one of these veins absent . . . . . 37
6. Fore wing with vein 9 out of stalk of 7 and 8 . . . . . 7  
     Fore wing with vein 9 separate . . . . . 10
7. Fore wing with veins 3 and 4 stalked . . . . . 8  
     Fore wing with veins 3 and 4 separate . . . . . 9
8. Palpus ascending, hind wing with veins 3 and 4 stalked, 6 and 7 stalked .  
     . . . . . *Dicellitis* MEYRICK  
     Palpus porrect, hind wing with veins 3 and 4 connate, 6 and 7 nearly approximated towards base . . . . . *Hydaranthes* MEYRICK
9. Fore wing with vein 7 to apex, costal fold in male present; palpus ascending . . . . . *Capnoptycha* MEYRICK  
     Fore wing with vein 7 to termen . . . . . *Pandurista* MEYRICK

<sup>1)</sup> Herewith a definitive key to the Papuan genera of the Tortricinae is presented. A preliminary key was published in part I, pp. 30—33.

<sup>2)</sup> This feature can easily be observed in dried specimens with a magnification of 10—30 times.

10. Fore wing with vein 3 distinctly from before angle of cell . . . . . 11  
Fore wing with vein 3 from angle of cell . . . . . 16
11. Basal segment of abdomen with peculiar organs visible by two small dorsal openings . . . . . *Tremophora* gen. nov.  
Basal segment of abdomen without such openings . . . . . 12
12. Fore wing in male without costal fold . . . . . 13  
Fore wing in male with costal fold . . . . . 15
13. Palpus moderate; hind wing with veins 6 and 7 closely approximated towards base; unusually coloured species: white, either with black marginal markings or with reddish apical half of wing; male genitalia of eacocciine type, with sacculus unarmed . . . . . *Chresmarcha* MEYRICK  
Hind wing with veins 6 and 7 short-stalked; brownish species, with usual tortricoid markings . . . . . 14
14. Hind wing with veins 3 and 4 approximated, but separate; fore wing with termen rounded; male genitalia of eacocciine type. *Mesocalyptis* gen. nov.  
Hind wing with veins 3 and 4 connate; fore wing with termen concave; male genitalia of eneplasiine type, with sacculus toothed . . . . .  
. . . . . *Macrothyma* DIAKONOFF
15. Fore wing broad, truncate; hind wing with vein 3 from considerably before angle of cell . . . . . *Adoxophyes* MEYRICK  
Fore wing rather narrow, elongate-ovate; hind wing with vein 3 from a short way before angle of cell . . . . . *Arizelana*, gen. nov.
16. Hind wing with veins 6 and 7 approximated towards base or remote . . 17  
Hind wing with veins 6 and 7 connate or stalked . . . . . 22
17. Fore wing with dorsal scale-projection before middle. *Pterozygia* MEYRICK  
Fore wing without such projection . . . . . 18
18. Hind wing with vein 4 absent . . . . . *Heterochorista* DIAKONOFF  
Hind wing with vein 4 present . . . . . 19
19. Fore wing with vein 7 to apex or costa. . . . . *Phricanthes* MEYRICK  
Fore wing with vein 7 to termen. . . . . 20
20. Hind wing with veins 3 and 4 separate. . . . . 21  
Hind wing with veins 3 and 4 connate or stalked. *Polydrachma* MEYRICK
21. Hind wing with veins 4 and 5 closely approximated or connate; veins 6 and 7 closely approximated towards base . . . . *Thrinophora* MEYRICK (part)  
Hind wing with vein 4 nearer to 3 than to 5 or 3-5 equidistant . . . . .  
. . . . . *Hiceteria* gen. nov. (part)
22. Hind wing with veins 6 and 7 connate, diverging . . . . . 23  
Hind wing with veins 6 and 7 stalked . . . . . 24
23. Hind wing with veins 3 and 4 remote . . . . . *Aphthonocosma* gen. nov.  
Hind wing with veins 3 and 4 stalked . . . . . *Nikolaia* gen. nov.
24. Hind wing with veins 3 and 4 separate. . . . . 25  
Hind wing with veins 3 and 4 connate or stalked . . . . . 29
25. Palpus subascending. . . . . *Hiceteria* gen. nov. (part)  
Palpus porrect . . . . . 26
26. Fore wing with raised scale-tufts . . . . . *Thrinophora* MEYRICK (part)  
Fore wing without raised scale-tufts . . . . . 27
27. Hind wing with vein 3 from before angle. . . . . *Metaselenia* DIAKONOFF  
Hind wing with vein 3 from angle . . . . . 28
28. Fore wing with vein 2 from  $\frac{2}{3}$ , vein 4 nearer to 3 than to 5; hind wing with discoidal vein normal . . . . . *Choanograptis* MEYRICK  
Fore wing with vein 2 from  $\frac{1}{2}$ - $\frac{3}{5}$ , veins 3-5 approximated, equidistant; hind wing with discoidal vein oblique . . . . . *Isochorista* MEYRICK
29. Palpus ascending or subascending. . . . . 30  
Palpus porrect . . . . . 32

30. Palpus ascending, appressed to face, mostly thickened, rather short . . . . . *Homona* WALKER  
Palpus subascending; slender and moderately long, or cylindrical and with closely appressed scales . . . . . 31
31. Palpus rather thick, cylindrical, long, with closely appressed scales . . . . . *Aeolostoma* MEYRICK  
Palpus slender, moderate, not cylindrical . *Rhomboceros* MEYRICK, females
32. Palpus moderately long or rather long, median segment with appressed scales above, with scales beneath projecting towards apex, forming a wedge-shaped tuft . . . . . *Carphomigma* gen. nov.  
Palpus without such tuft . . . . . 33
33. Hind wing with veins 3 and 4 stalked . . . . . 34  
Hind wing with veins 3 and 4 connate . . . . . *Epagoge* HÜBNER (part)
34. Antenna in male thickened towards base . . . . . *Rhomboceros* MEYRICK, males  
Antenna in male not thickened towards base . . . . . 35
35. Palpus dilated by roughly projecting scales above and beneath . . . . . *Epagoge* HÜBNER (part)  
Palpus slender or very slender, smoothly scaled above, roughish below. 36
36. Fore wing in male with costal fold; male genitalia of *Rhomboceros* type . . . . . *Aplastoceros* gen. nov.  
Fore wing in male without costal fold; male genitalia of *Cnephasia* type . . . . . *Cleptacaca* gen. nov.
37. Fore wing with veins 8 and 9 stalked . . . . . *Antigraptis* MEYRICK  
Fore wing with veins 8 and 9 separate . . . . . 38
38. Fore wing with vein 6 apparently to costa . . . . . *Eboda* WALKER (part)  
Fore wing with vein 6 to termen . . . . . 39
39. Fore wing with veins 3 and 4 connate or stalked . . . . . 40  
Fore wing with veins 3 and 4 separate . . . . . 42
40. Hind wing with vein 4 absent . . . . . *Eboda* WALKER (part)  
Hind wing with vein 4 present . . . . . 41
41. Fore wing with vein 2 from  $\frac{1}{3}$  of cell . . . . . *Berylllophantis* MEYRICK  
Fore wing with vein 2 from  $\frac{2}{3}$ - $\frac{3}{5}$  of cell . . . . . *Spatalistis* MEYRICK
42. Hind wing with cubital pecten . . . . . *Arctephora* gen. nov.  
Hind wing without cubital pecten . . . . . 43
43. Fore wing with vein 7 to apex or costa . . . . . 44  
Fore wing with vein 7 to termen (in one species to apex, then fore wing without scale-tufts) . . . . . 45
44. Hind wing with veins 6 and 7 approximated towards base, palpus very long; thorax with double posterior crest . . . . . *Lophoprora* MEYRICK  
Hind wing with veins 6 and 7 stalked; palpus moderate or moderately long; thorax without crest . . . . . *Polyortha* DOGNIN
45. Anal tergite and its scaling in male very large, forming a shining smooth cap over anal segment . . . . . *Leptochroptila* DIAKONOFF  
Anal tergite in male normal . . . . . 46
46. Hind wing with veins 3 and 4 separate, or vein 4 absent (seldom 3 and 4 connate or short-stalked in *Parachorista*, *Epichorista* and *Anisotenes* . . . . . 47  
Hind wing with veins 3 and 4 connate or stalked . . . . . 50
47. Thorax without crest . . . . . 48  
Thorax with a more or less developed posterior crest . . . . . 49
48. Fore wing mostly without costal fold; male genitalia with a simple valva (*Epagoge* type) . . . . . *Epichorista* MEYRICK  
Fore wing with costal fold; male genitalia with complicated valva (*Isotenes* type) . . . . . *Parachorista* DIAKONOFF
49. Fore wing with cell dilated, parting vein present . . . . . *Harmologa* MEYRICK  
Fore wing with cell narrowed, parting vein absent . . . . . *Anisotenes* DIAKONOFF

50. Antenna stout; palpus triangularly dilated. Hind wing with vein 7 to apex  
 . . . . . *Taeniarchis* MEYRICK  
 Antenna normal; hind wing with vein 7 to termen. . . . . 51
51. Hind wing with veins 6 and 7 separate. . . . . 52  
 Hind wing with veins 6 and 7 connate or stalked. . . . . 53
52. Male genitalia with valva ornated with a rounded pad on inner side toward  
 base . . . . . *Isodemis* DIAKONOFF  
 Valva without such pad . . . . . *Syndemis* HÜBNER
53. Hind wing with veins 6 and 7 connate . . . . . *Eremas* TURNER  
 Hind wing with veins 6 and 7 stalked . . . . . 54
54. Palpus porrect . . . . . 55  
 Palpus subascending. . . . . 57
55. Hind wing with veins 3 and 4 connate . . . . . *Cnephasia* CURTIS  
 Hind wing with veins 3 and 4 stalked . . . . . 56
56. Fore wing with costa more or less curved, convex, costal cilia normal; male  
 genitalia with well-developed dentate labides *Neocalyptis* DIAKONOFF (part)  
 Fore wing with costa sinuate, concave beyond middle; costal cilia with a  
 triangular projection at  $\frac{1}{3}$ ; male genitalia without developed labides . . .  
 . . . . . *Diadelomorpha* DIAKONOFF
57. Thorax with a posterior crest . . . . . *Ochetarcha* MEYRICK  
 Thorax without crest . . . . . *Paradichelia* DIAKONOFF

## TORTRICINAE

## CACOECIINI

(continued)

**Choanograptis** MEYRICK, 1938 (fig. 209)

*Choanograptis* MEYRICK, 1938, Trans. Ent. Soc. Lond., vol. 87, p. 504. DIAKONOFF,  
 Zool. Meded. Mus. Leiden, vol. 21, p. 156 (redescr.), figs. 4 J, K (neur., head), 1939.

The definition of this genus has been corrected once (1939), after the present author had the opportunity of studying the unique specimen of its type, *Choanograptis didyma* MEYRICK (in the British Museum). At present its definition has to be slightly amplified, in consequence of the study of the more extensive material at hand. The genus may be redescribed as follows.

Head clothed with dense roughly appressed hair-seales. Ocellus posterior. Proboscis developed. Antenna short-ciliate in both sexes, scape moderate. Palpus rather thickened with seales, somewhat sinuate, moderate, sometimes rather long in female, subascending or porrect, median segment more or less expanded posteriorly by roughish seales above or below, terminal segment moderate, longer in female, subacute, or rather obtuse. Thorax with a slight posterior crest. Fore wing without costal fold in male. 1b rather short-furcate, 2 from  $\frac{2}{3}$ , 3 from angle, 4 more or less closely approximated to 3 at base, 5 and 6 remote and parallel, 7 and 8 rather short-stalked, 7 to termen, 11 from  $\frac{2}{5}$ . Hind wing without cubital peeten, with a long pencil of hairs on base of vein 1b above; 2 from beyond middle, 3 from angle, separate from 4, 3—5 tolerably equidistant, 5 little curved at base, 6 and 7 stalked.

Tegumen strong, rectangular. Uncus strong, top mostly broad. Socius small, pending. Gnathos mostly very strong, arms scobinate below. Transtilla unpaired, broad, scobinate at the sides. Valva moderate, simple, slightly elongate. Aedoeagus strong, often with a distal thorn. Cornuti, a sheaf on spines.

Ostium cup-shaped. Ductus bursae narrow, long. Bursa copulatrix small, spheroid. Colliculum and cestum absent. Signum, a moderate thorn without capitulum. Ovipositor lobes rather narrow.

Moths of moderate size and distinct facies: with elongate wings, with costa gradually curved, apex projecting, termen moderately sinuate; often with the following characteristic markings: edge of basal patch, and anterior edges of central fascia and of costal patch forming parallel transverse bands; costal patch large, wedge-shaped, reaching almost to tornus; a dark small dot on end of cell. Correlated with the Asiatic

*Leontochroma* WALSINGHAM and perhaps also with *Ulodemis* MEYRICK, and, judging by the male genitalia, also with *Adoxophyes* MEYRICK. *Capua parorthota* MEYRICK, 1928 (*Ex. Microl.*, vol. 3, p. 453), from the Bismarck Archipelago, and *Catamacta dihamma* DIAKONOFF, 1941 (*Treubia*, vol. 18, pp. 416—417), from Borneo, belong to this genus, and possibly also the Australian *Anisogona placoxantha* LOWER, 1896 (*Trans. Roy. Soc. S. Austral.*, vol. 20, p. 160), and *Acroceuthes oxygrammana* MEYRICK, 1881 (*Proc. Linn. Soc. N.S. Wa-*

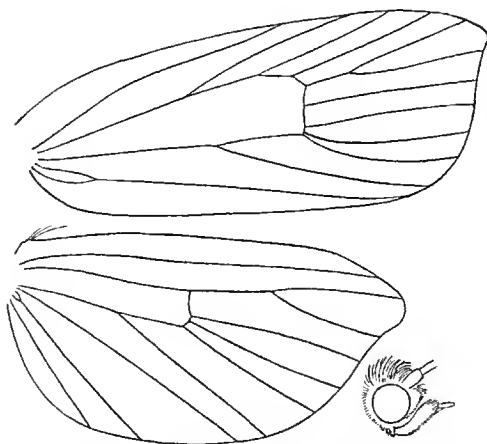


Fig. 209: *Choanograptis didyma* MEYRICK, female, wing neurulation and head.

les, vol. 6, p. 460); however, we do not possess any material of the two last mentioned species at present, to make sure.

#### Key to the known species of *Choanograptis*<sup>1)</sup>

1. Basal patch, central fascia and costal patch separated by paler ground colour, often edged with silvery . . . . . 2  
These markings indefinite or fore wing with four parallel oblique brownish lines . . . . . 8
2. Edge of basal patch inwardly oblique . . . . . *dihamma* DIAKONOFF (Borneo)  
Edge of basal patch outwardly oblique . . . . . 3
3. Costal patch not reaching to tornus . . . . . *diagrapha* spec. nov.  
Costal patch touching tornus . . . . . 4

<sup>1)</sup> Descriptions of four new species of *Choanograptis* from New Guinea were published elsewhere. These species could not be incorporated in the present key. See Addenda, p. 165.



4. Markings edged with silvery-whitish lines. . . . . *argyrocyra* spec. nov.  
No such lines . . . . . 5
5. Pale streak between central fascia and costal patch narrow, with a small  
dentation above middle anteriorly. . . . . *hamuligera* spec. nov.  
That streak broad, without such dentation . . . . . 6
6. Central fascia and costal patch with a median interconnection . . . . .  
. . . . . *didyma* MEYRICK  
Those markings not interconnected. . . . . 7
7. Anterior edge of costal patch straight . . . . . *paragrapha* spec. nov.  
That edge angulate slightly above middle . . . . . *parorthota* MEYRICK
8. Bright brownish-ochreous, with four parallel, oblique brown lines . . . . .  
. . . . . *tetraulae* spec. nov.  
Brownish, with markings scarcely indicated. . . . . *diaphora* spec. nov.

**Choanograptis diagrama** spec. nov. (figs. 210, 211)

*διαγράφω* = to make a sketch

♀ 22–25 mm. Head, palpus, antenna and thorax rather dark brownish-fuscous. Abdomen whitish-ochreous, tinged with tawny, venter slightly infuscated. Legs pale ochreous-tawny, anterior leg infuscated above. Fore wing elongate, subtriangular, dilated posteriorly, costa considerably curved throughout, apex subacute, termen slightly sinuate, little oblique. Very pale fuscous touched with rosy, markings well-defined, deep coffee-brown and greyish-fuscous, more greyish towards costa, more or less narrowly edged with glossy pale lines. Basal patch suffused with greyish-fuscous, with edge from before  $\frac{1}{5}$  of costa to above and before  $\frac{2}{5}$  of dorsum, almost straight, oblique, sometimes with a small angulation at  $\frac{1}{3}$ ; basal patch suffused with deep coffee-brown below costa to above dorsum, this suffusion gradually dilated downward, connected with dorsum by a broad greyish indefinite cloud along its anterior third; central fascia moderately broad, suffused with fuscous-greyish on upper half of wing; anterior edge of fascia slightly convex above, concave above dorsum, from  $\frac{1}{3}$  of costa to  $\frac{3}{4}$  of dorsum, suffused with deep coffee-brown from just below costa to dorsum; this suffusion narrowed above and beneath, in middle reaching halfway across central fascia; posterior edge of fascia parallel to anterior, from costa just before middle, this edge and posterior half of central fascia obliterate below  $\frac{1}{4}$  of wing; a small vertical erect-ovate deep brown dot on end of cell, with a minute projection above; costal patch large, conspicuous, deep coffee-brown, suffused with fuscous-greyish towards costa anteriorly, distinctly edged throughout with a glossy narrow pale line, anterior edge parallel to that of basal patch, posterior edge gradually excavate in middle, top rounded, reaching to vein 3 above tornus; dorsal half and terminal area evenly suffused with greyish-fuscous, touched with pink, regularly transversely strigulated with dark fuscous-grey; a small dark fuscous dot on costa before apex, sometimes connected by a vertical dark grey line with terminal line; terminal edge narrowly dark fuscous-grey. Cilia greyish-fuscous, touched

with pink, more so along basal half. Hind wing pale ochreous-greyish, faintly transversely blotched with dark grey towards apex, cilia concolorous.

Ostium, a broad, sclerotised cup, ending in a short funnel. Limen narrow. Signum a moderate, dentate hook (Slide No. 513 D, holotype).

Top Camp, 2100 m, January 25, 1939. Moss Forest Camp, 2600–2800 m, October 9–November 5, 1938 (holotype). Three females.

**Choanograptis paragrapha spec. nov. (fig. 217)**

*παρά* = beside, *γράφω* = to write

♂ 16 mm. Head dark lilac-fuscous, face paler. Palpus dark lilac-fuscous, terminal segment paler towards base. Antenna greyish-fuscous, ringed with dark lilac-fuscous. Thorax dark fuscous ? (rubbed). Abdomen pale ochreous. Legs pale ochreous, anterior infuscated (damaged). Fore wing without fold, elongate-subovate, costa moderately curved throughout, apex bluntly projecting, termen slightly concave above, obliquely rounded beneath. Whitish, suffused with pale lilac-fuscous, markings lilac-fuscous. Basal patch suffused on base of wing, and along edge with darker lilac-fuscous; this edge slightly sinuate, from  $\frac{1}{4}$  of costa to  $\frac{2}{5}$  of dorsum; central fascia tolerably parallel to this edge, from before middle of costa to dorsum before tornus, slightly dilated in middle, lower half of posterior edge suffused; costal patch large, erect-triangular, occupying more than fourth fifth of costa, to tornus, with anterior edge parallel to that of basal patch, posterior edge less oblique; a minute transverse vertical strigula on costa before apex; apex and termen suffused with dark lilac-fuscous. Cilia fuscous (imperfect). Hind wing whitish, faintly infuscated along apical and terminal edge; cilia dirty whitish.

Uncus strong, gradually narrowed towards top, not constricted. Socius small. Gnathos very strong, lower angles scobinate, dilated, hook narrow. Transtilla curved, little dentate at the sides. Aedoeagus scobinate in middle, a subapical short thorn (Slide No. 516 D).

Sigi Camp, 1500 m, February 20, 1939. One specimen. Nearest to *C. didyma* MEYRICK, 1938, from Papua.

**Choanograptis argyrocyra spec. nov. (fig. 212)**

*ἄργυρος* = silver, *κύμα* = a wave

♂ 19.5 mm. Head, palpus, antenna and thorax ochreous-tawny, latter paler posteriorly, terminal segment of palpus slightly darker. Abdomen and anal tuft pale ochreous, shining, a broad transverse preanal dark fuscous band above. Legs pale ochreous, anterior leg brighter ochreous, with tibia and tarsus fuscous, light-ringed. Fore wing with a moderately broad, gradually narrowed costal fold to beyond middle, its edge closely appressed to wing, not ciliate (it can easily be overlooked), elongate-subovate; costa gradually curved throughout, apex subacute, termen

sinuate, moderately oblique. Light ochreous-tawny, markings suffusedly darker tawny-fuscos, more suffused towards margins, especially on lower half of wing, edged with narrow silvery-ochreous streaks. Basal patch rather large, on costa to about  $\frac{1}{7}$ , on dorsum to  $\frac{2}{5}$ , with margin sinuate, and with a moderate angulation at  $\frac{1}{3}$ ; basal patch edged posteriorly by a silvery-ochreous streak from below fold to before dorsum; central fascia with anterior edge from before  $\frac{1}{3}$  of costa to  $\frac{3}{5}$  of dorsum, sinuate, with a moderate, bluntly angulate projection above middle; this fascia edged anteriorly by a silvery streak from costa to dorsum; posterior margin of fascia slightly edged with a few short tawny-fuscos streaks above, suffused and indefinite below, running from middle of costa to tornus, concave above, with an angulate projection above middle, concave again below this, lower fifth touching end of costal patch: an erect-ovate, vertical, small tawny spot on lower angle of cell; costal patch very large, extending on costa from before  $\frac{3}{5}$  to before apex, anterior edge to tornus, hardly concave above and beneath, slightly indent in middle, preceded by a silvery marginal line which is somewhat dilated in middle of disc; posterior edge of costal patch inwardly oblique, somewhat convex, and broadly suffused with tawny-fuscos above, deeply indent on vein 7; below this indentation almost straight, outwardly oblique, slightly dentate on veins, to termen above tornus; costal patch also posteriorly edged throughout by a narrow silvery-ochreous line; faint transverse interrupted fuscos-tawny strigulae on lighter parts of wing, especially on upper half, two small costal dots on costal patch, one just before apex; terminal edge faintly suffused with tawny; cilia light tawny with a series of rounded tawny-fuscos blotches, with a faint antemedian line. Hind wing and cilia pale whitish-ochreous, glossy, somewhat brighter ochreous towards edge; basal pencil of hairs light ochreous.

Uncus narrowed below top. Socius elongate. Gnathos very strong, lower angles dilated, strongly scobinate. Transtilla straight, lateral dentations moderate. Aedoeagus with a long sinuate subapical horn (Slide No. 514 D).

Moss Forest Camp, 2600–2800 m, October 9–November 5, 1938. One specimen.

**Choanograptis tetraulax** spec. nov. (figs. 213, 214)

*τετρα* = four, *αὐλαξ* = a furrow

♀ 15 mm. Head light ochreous. Palpus rather slender, light ochreous, sprinkled with brown, apex of median segment pale. Antenna grey. Thorax bright ochreous. Abdomen dark grey, whitish towards base. Legs light ochreous, tibiae infuscated and light-ringed, posterior tibia yellowish. Bright ochreous, faintly irrorated with pale brownish, markings brown. Four tolerably parallel, oblique, almost straight narrow rather equidistant lines, first line from  $\frac{1}{6}$  of costa to dorsum beyond  $\frac{2}{5}$ , last line from  $\frac{2}{3}$  of costa to termen just above tornus, posterior three lines somewhat outwardly curved below; thus edged basal patch, central fascia, and apical



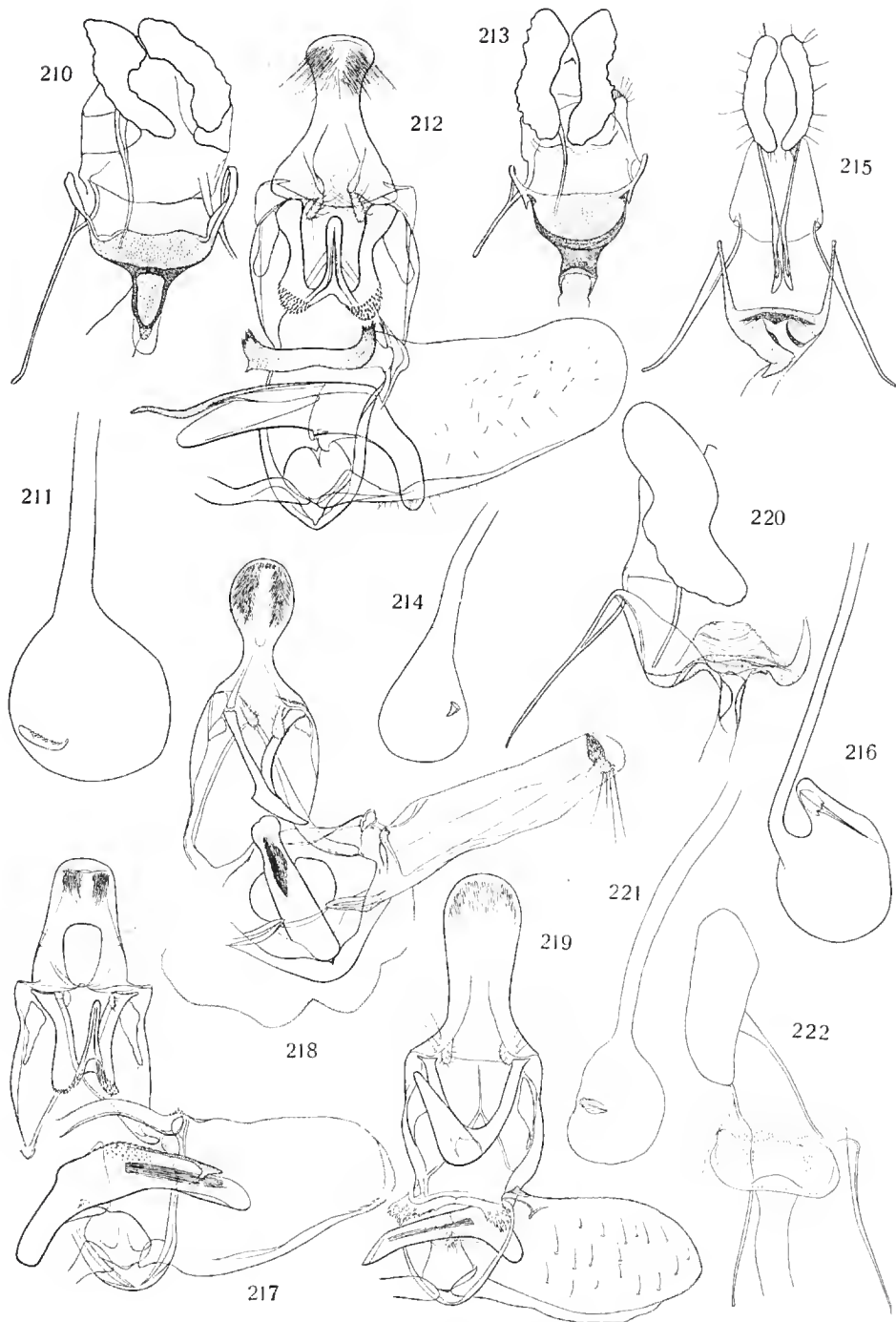
$\frac{1}{4}$  of wing slightly evenly suffused with brownish, little darker than ground colour; costa dotted throughout, with three slender short transverse strigulae before apex; dorsum anteriorly indistinctly suffused with fuscous; termen somewhat darker suffused, edged in middle with a narrow dark brown line. Cilia deep ochreous, mixed with fuscous. Hind wing light ochreous, faintly suffused with greyish along basal half, apical half distinctly transversely dotted with dark fuscous. Cilia pale ochreous-greyish, greyish along dorsum.

Limen narrow. Ostium, a wide eup, ending in a funnel. Signum small, tooth-shaped (Slide No. 518 D).

Sigi Camp, 1500 m, February 18, 1939. One specimen.

***Choanograptis hamuligera* spec. nov. (fig. 219)**

♂ 20 mm. Head, palpus, antenna, and thorax dark brownish-fuscous, latter somewhat paler, tinged with lilac. Abdomen whitish-ochreous, faintly infuscated posteriorly, anal tuft whitish-ochreous. Legs light ochreous, anterior and median legs suffused with light brownish, pale-ringed. Fore wing without costal fold, elongate-subtriangular, rather narrow, costa moderately curved anteriorly, less curved posteriorly, apex subacute, slightly prominent, termen gradually slightly concave above, rounded beneath, little oblique. Rather dark lilac-fuscous, markings ochreous-whitish, glossy, well-defined. A moderately broad transverse fascia from  $\frac{1}{5}$  of costa to  $\frac{2}{5}$  of dorsum, slightly gradually narrowed towards costa, hardly narrowed above dorsum, narrowly edged with deep chestnut brown; this colour forming a suffusion along fold to base, and a rather well-defined invert, erect-ovate patch on middle of dorsum to middle of disc, suffused above; another transverse fascia narrow, faintly inwardly sinuate, from beyond middle of costa to tornus, with a rather abrupt small dilatation in tornus, and with a small slender vertical branch on transverse vein, acute top of branch on lower angle of cell; this fascia edged anteriorly, and more distinctly posteriorly, with bright fulvous-reddish suffusion; top of above mentioned branch connected by posterior edge of dorsal patch with small elongate ochreous streaks, situated before, and on top of second fascia, and with three somewhat larger ochreous dots along posterior third of costa; a narrow faint leaden-grey sinuate striga from tornus to first of those dots, another one from  $\frac{3}{4}$  of termen, furcate in middle, to second and third costal dots; wing more or less suffused with darker lilac-fuscous, especially along base and along costa, faintly transversely strigulated with the same colour elsewhere. Cilia rather dark fuscous-lilac, faintly barred with darker, a narrow dark antemedian line, Hind wing pale ochreous-fuscous, faintly dotted with greyish, somewhat brighter ochreous in apex. Cilia whitish ochreous, around apex tinged with pale fulvous, a large suffused greyish blotch on costa just before apex.



Genitalia of Tortricinae. Fig. 210: *Choanograptis diagraptha* spec. nov., female, ovipositor and ostium. Fig. 211: *idem*, bursa copulatrix. Fig. 212: *C. argyrocygna* spec. nov., male. Fig. 213: *C. tetraulax* spec. nov., female, ovipositor and ostium. Fig. 214: *idem*, bursa copulatrix. Fig. 215: *C. diaphora* spec. nov., female, ovipositor and ostium. Fig. 216: bursa copulatrix. Fig. 217: *C. paragrapha* spec. nov., male. Fig. 218: *Aeolostoma melanostoecha* spec. nov., male. Fig. 219: *C. hamuligera* spec. nov., male. Fig. 220: *Hiceteria stannosa* spec. nov., female, ovipositor and ostium. Fig. 221: *Arizelana bibatrix* spec. nov., female, ductus bursae and bursa copulatrix. Fig. 222: *idem*, ovipositor and ostium.

Uncus broad, scarcely constricted, top rounded. Socius small. Gnathos with lower angles not dilated, hook very large. Transtilla straight, incised in middle below, lateral dentate knobs large. Aedoeagus simple (Slide No. 515 D, holotype).

Lake Habbema, 3250–3300 m, August 10, 1938 (holotype). Letterbox Camp, 3600 m, September 9, 1939. Two males.

**Choanograptis diaphora** spec. nov. (figs. 215, 216)

*διάφορος* = different

♀ 18 mm. Head light ochreous. Palpus pale brownish-ochreous, median segment towards apex below, and terminal segment posteriorly, suffused with dark grey. Antenna light ochreous, grey posteriorly. Thorax light brownish. Abdomen pale ochreous, suffused with grey above, especially towards apex, anal scales pale ochreous. Legs pale ochreous, anterior and median strongly infuscated, tibiae light ringed. Fore wing elongate, little dilated, considerably curved anteriorly, straight posteriorly, apex subacute, projecting, termen considerably sinuate. Ochreous-brownish, indistinctly irrorated and strigulated with brown, slightly suffused with greyish, markings indistinct, dark brown. Costa with minute transverse subtriangular marks anteriorly, posteriorly becoming moderate triangular dots; two faint, oblique, parallel lines from  $\frac{1}{4}$  and beyond  $\frac{2}{5}$  of costa, indicating edges of central fascia, first line to beyond  $\frac{3}{4}$  of dorsum, dilated so as to form a moderate ill-defined dark brown suffusion on dorsum below fold; second line becoming obliterate below  $\frac{1}{3}$  of disc: a group of some three rounded bright brown moderate patches on discoidal vein, followed by an indistinct curved series of smaller spots, not reaching costa and dorsum; termen more distinctly marked with minute continuous transverse dark fuscous lines. Cilia brownish-fuscous, becoming light fulvous in tornus, on dorsum fuscous. Hind wing pale ochreous, slightly suffused with greyish towards dorsum, regularly faintly marbled with greyish.

Genital segment strongly erect. Ostium cup-shaped, sclerotised, lower edge scobinate. Limen moderate. Signum long, dagger-shaped with a flattened rounded top. Anal sternite erect, postapophyses strong, dilated posteriorly. Ovipositor elongate (Slide No. 517 D).

Mist Camp, 1800 m, January 8, 1939. One specimen.

**Epagoge** HÜBNER, 1826

*Epagoge* HÜBNER, 1826, Verz. bek. Schmett., p. 389. MEYRICK, Handb. Brit. Lep., p. 527, 1895 (part). WALSHINGHAM, Ann. Mag. Nat. Hist., ser. 7, vol. 5, p. 483, 1900. FERNALD, Gener. Tortr. Typ., pp. 15, 58, 1908. KENNEL, Zoologica, vol. 54, p. 108, 1910. PIERCE, Genit. Tortr., p. 7, pl. 3, 1922. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 78, 1929.

*Capua* STEPHENS, 1834, Ill. Brit. Ent. Haust., vol. 4, p. 171; etc.

*Teratodes* GUENÉE, 1845, Ann. Soc. Ent. Fr., ser. 2, vol. 3, p. 34; etc.

*Dichelia* STANTON, 1858, Manual, vol. 2, p. 197; etc.

*Sperchia* WALKER, 1869, Char. Undeser. Het., p. 83; etc.

*Epitymbia* MEYRICK, 1881, Proc. Linn. Soc. N.S. Wales, vol. 6, pp. 657–658, etc.

## Key to the Papuan species

1. Coffee-brown, marked with silvery-white transverse streaks . . . . .  
 . . . . . *rhabdomaga* MEYRICK  
 Ochreous, suffused and marked with fulvous and dark brown . . . . .  
 . . . . . *consersa* spec. nov.

**Epagoge consersa spec. nov. (fig. 240)**

♂ 16 mm. Head and palpus fulvous. Antenna and thorax fuscous. Abdomen pale ochreous, whitish towards base, suffused with greyish posteriorly. Legs pale ochreous, anterior infuscated, femur fulvous, tibia light-ringed. Fore wing without costal fold, broad, dilated, costa strongly curved throughout, stronger curved anteriorly, apex obtuse, termen slightly concave above middle, moderately oblique. Ochreous, strongly suffused with fulvous and dark brown, gradually dotted throughout with dark brown, dots moderate, rounded, arranged in curved transverse rows, towards termen forming interrupted transverse strigulae. Basal patch slightly suffused with fulvous, its edge ill-defined, rather straight, oblique; a dark brown suffused streak along dorsum from before base to before middle; ground colour between basal patch and central fascia somewhat paler, scarcely irrorated; fascia ill-defined, broad, from  $\frac{1}{3}$  of costa to posterior fourth of dorsum, suffused with darker brownish-fulvous, especially towards anterior edge, which is rather straight and suffused with dark brown below, with a narrow dark brown strigula above, and a small angulate projection in fold; posterior edge slightly convex along upper half, with a projection of dark grey suffusion on end of cell, indefinite below this; costal patch indicated by indistinct moderate fulvous triangular suffusion from  $\frac{3}{5}$  of costa to before apex, reaching below to vein 7; posterior  $\frac{2}{5}$  of wing except in apex, suffused with bright ochreous; posterior  $\frac{2}{5}$  of costa with about five dark brown dots continued by short strigulae across wing; a more conspicuous, curved transverse row of dark brown dots in tornus, reaching above to about vein 6. Cilia fulvous, basal half dark fuscous. Hind wing whitish, faintly dotted with fuscous; cilia whitish, basal half infuscated; cilia elsewhere with a faint greyish antemedian line.

Tegumen broad, rounded, Uncus moderate, top dilated. Socius small, pending, gnathos robust. Valva simple, sacculus sclerotised, with top bluntly projecting. Transtilla peculiar: two strong horns bent downward, united in middle, basal half scobinate. Aedocagus pistol-shaped. Vinculum weak (Slides No. 501 D, paratype, figured; No. 492, holotype).

Moss Forest Camp, 2600–2800 m, October 12, 1938. Mist Camp, 1800 m, November 18, 1938 (holotype). Rattan Camp, 1200 m, March 5, 1939. Three specimens.

**Paradichelia DIAKONOFF, 1952 (fig. 223)**

*Paradichelia* DIAKONOFF, 1952, Proc. Kon. Nederl. Ak. Wetensch., ser. C, vol. 55, pp. 384–387 (key to species).

## Key to the species

1. Fore wing in male without costal fold . . . . . 2  
Fore wing in male with costal fold; central fascia in female interrupted above middle, or absent; only a trace of a transverse mark below middle of termen . . . . . 5
2. A complete central fascia present . . . . . *basipuncta* DIAKONOFF  
Central fascia obliterate below middle of wing . . . . . 3
3. Fore wing with costal markings ill-defined; a small white dot on end of cell . . . . . *ocellata* spec. nov.  
Costal markings conspicuous, no discal white dot . . . . . 4
4. Fore wing with a semiovate spot on middle of costa; costal patch reaching to termen above tornus. . . . . *clarinota* spec. nov.  
Fore wing with a transverse wedge-shaped spot on middle of costa; costal patch reaching to middle of termen . . . . . *fulvitacta* spec. nov.
5. Females . . . . . 6  
Males . . . . . 7
6. Head, palpus, thorax with ground colour grey . . . . . *rostrata* DIAKONOFF  
Head palpus thorax with ground colour pale tawny-ochreous . . . . . *coenographa* MEYRICK
7. Fore wing with apex moderately pointed, termen slightly sinuate and distinctly oblique above . . . . . *rostrata* DIAKONOFF  
Fore wing with apex bluntly rectangular, termen straight, almost vertical . . . . . 8
8. Costal fold broad, rounded; costa distinctly rounded and prominent in middle, appearing sinuate beyond middle . . . . . *euryptycha* DIAKONOFF  
Costal fold elongate, not distinctly rounded; costa not sinuate posteriorly . . . . . 9
9. Ground colour grey . . . . . *brongersmai* DIAKONOFF  
Ground colour pale ochreous . . . . . *coenographa* MEYRICK

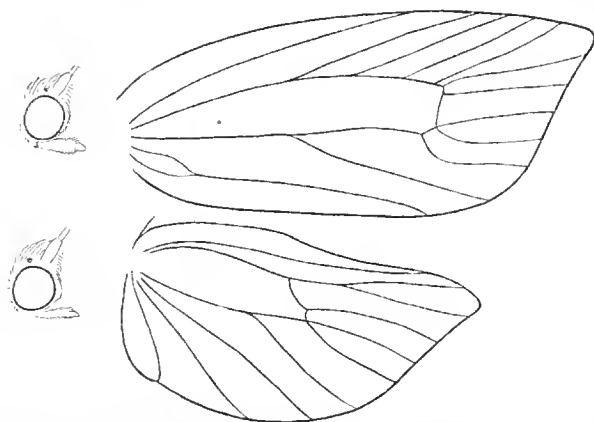


Fig. 223: *Paradichelia clarinota* spec. nov., wing neuration, male, head male (above), head female (below).

***Paradichelia clarinota* spec. nov. (figs. 223, 235)**

♂, ♀ 14 mm. Head and thorax whitish-ochreous, face and shoulder suffused with blackish. Palpus blackish-fuscous. Antenna pale ochreous, flagellum ringed with dark brown, scape blackish. Abdomen ochreous-grey (in female missing). Legs pale ochreous, suffused above and ringed with fuscous. Fore wing elongate, rather narrow, dilated, costa considerably curved anteriorly, straight posteriorly, apex moderately rounded, termen slightly convex, oblique. Whitish-ochreous, faintly transversely



strigulated with pale yellowish, markings blackish-fuscous, and brownish-ochreous. Basal sixth of costa with a blackish streak; from end of this a narrow blackish obliquely transverse streak to middle of disc before  $\frac{1}{4}$ , triangular space between both streaks suffused with greyish, darker towards costa, with a few black scales above middle of disc; a moderate semiovate brownish-ochreous patch on costa before middle, mixed with blackish-fuscous below costa anteriorly, a few dark scales below this; costal patch large, along costa from  $\frac{3}{5}$  to before apex, erect-triangular, apex acute and curved, to termen above tornus; this patch with upper half deep brownish-ochreous, marked along costa with three small brownish dots alternating with whitish-ochreous dots, lower half of patch ochreous-grey, edged with fuscous-blackish; terminal fifth of wing with a few irregular small dark fuscous marks; some dark grey irroration along posterior third of dorsum and in tornus. Cilia light fulvous-ochreous, basal half whitish-ochreous barred with dark fuscous except along base. Hind wing pale ochreous, darker than fore wing, towards apex dotted with dark grey; cilia pale ochreous; a narrow antemedian line around apex, and along upper part of termen.

Uncus short, robust; top rounded, densely bristled below. Gnathos robust, point strong (turned upward in figure). Transtilla knob with strong teeth. Valva concave, somewhat pointed, sacculus weak. Vinculum rather strong (Slide No. 502 D, holotype).

Moss Forest Camp, 2600–2800 m, October 11, 1938. One male, holotype, one female, allotype.

***Paradichelia fulvitacta* spec. nov. (fig. 234)**

♂ 14.5 mm. Head pale ochreous, vertex infuscated. Palpus light brownish, paler towards base, median segment towards apex below and terminal segment, irrorated with dark fuscous. Antenna pale ochreous, fuscous-ringed. Thorax pale ochreous, suffused with fuscous (damaged). Abdomen pale ochreous, anal tuft brighter ochreous. Anterior leg pale ochreous below, dark fuscous above, tibia ringed with pale ochreous (other legs missing). Fore wing elongate-ovate, little dilated, costa without fold, gently curved throughout, apex pointed, slightly projecting, termen faintly concave above, rounded beneath, oblique. Pale ochreous, irrorated and suffused with dark brown, markings dark brown and fulvous. Anterior half of costa regularly dotted with dark brown; basal patch large, slightly irrorated and suffused with dark brown and ochreous-fulvous; edge of patch outwardly oblique, twice excavate, with an acute projection above middle, reaching below to  $\frac{2}{5}$  of dorsum; central fascia moderately broad, from costa before middle to tornus, upper half dark brown, suffused in middle with deep fulvous; lower half of fascia strongly dilated downwards, formed by a light tawny-ochreous retination, edged posteriorly by a narrow inwardly oblique somewhat angulated dark brown line from tornus to below middle of vein 5; costal patch formed by a broad longitudinal bright

fulvous patch along costa from before  $\frac{2}{3}$  to before apex, marked on costal cilia with three dark brown bars, connected anteriorly by a vertical broad projection with middle of central fascia, posterior extremity slightly suffused with dark brown, and connected with a subtriangular dark brown blotch on upper half of termen; a small dark brown vertical strigula from upper part of this blotch to costa before apex; anterior half of wing transversely strigulated with suffused dark brownish and light ochreous-fusca striae, which are marked with dark brown dots along dorsal edge. Cilia light brownish-ochreous. Hind wing pale ochreous, towards apex dotted with dark grey, cilia pale ochreous.

Uncus longer than in preceding species, top rounded, less bristled below. Gnathos slender. Transtilla knob smaller. Valva short, disc plicate, sacculus weak. Vinculum slender (Slide No. 503 D, type).

Top Camp, 2100 m, January 22, 1939. One specimen.

***Paradichelia ocellata* spec. nov. (figs. 271, 276, 277)**

♂ 20 mm, ♀ 21–24 mm. Head and thorax light brownish-ochreous, apex of the latter whitish, with two lateral dark brown spots. Palpus light brownish-ochreous, median segment suffused with dark brown towards apex below, terminal segment with a brown median band. Abdomen pale ochreous, venter with lateral rows of dark spots. Legs pale ochreous, anterior and median tibia and tarsus infuscated, pale ringed. Fore wing rather broad, dilated, without costal fold, costa considerably curved along anterior  $\frac{2}{3}$ , almost straight posteriorly, apex subobtusate, rather narrow, termen sinuate, little oblique. Light golden-brownish-ochreous, markings dark brown and white. Costal patch large, extending to  $\frac{1}{3}$  of wing, slightly suffused with greyish, and appearing greyish-olive, transversely strigulated with coarse brown, and whitish interrupted vertical fasciae except on dorsal fourth, edge indicated by a dark brown, moderately broad transverse fascia, strongly acutely angulate in upper third of disc, less acutely indented on fold, not reaching dorsum; this fascia edged with white posteriorly and interrupted above angulation and above fold, last interruption filled with white colour; central fascia indicated by a row of dark brown marks, edged with white anteriorly, viz., a dot below  $\frac{1}{3}$  of costa, an outwardly convex streak from below preceding to before middle of fold, and a dot beyond this just below fold; white colour forming an ill-defined circle at  $\frac{1}{3}$  of disc, connecting costal patch with central fascia; an ill-defined brownish suffusion beyond central fascia from costa to lower edge of cell, posterior edge oblique; a small conspicuous white spot on end of cell edged by some three dark brown points; a few dark brown points in cell and below fold posteriorly; dorsum narrowly edged with white and dotted with dark brown; a moderately broad transverse slightly darker brownish blotch along termen with an angulate projection between veins 4–6, edged and strigulated with dark brown; this blotch preceded by white marbling from below costa to tornus; a moderate,

transversely ovate spot above tornus, brownish, edged with dark brown. Cilia ochreous-fulvous, basal half whitish with a darker fulvous antemedian line, in tornus cilia paler with a basal row of suffused brown dots. Hind wing ochreous-whitish, slightly tinged brownish, and dotted with grey posteriorly. Cilia whitish, in apex and along upper half of termen with a subbasal fulvous fascia.

Tegumen broad, extremely short, uncus moderate, circular. Socius, a short row of minute bristles. Gnathos short, with a long narrow hook. Valva very small, concave, plicate on disc. Transtilla knob moderate, dentate. Vinculum moderate. Aedoeagus short (Slide No. 648 D, holotype).

Ostium rounded-cupshaped, lateral arms narrow. Colliculum moderate. Cestum absent. Ductus bursae narrow, bursa spheroid. Signum small, little curved, capitulum elongate (Slide No. 649 D, allotype).

Moss Forest Camp, 2800 m, October 9–November 5, 1938 (allotype, female), October 18, 1938 (holotype, male). Two males, two females. Distinct by light brownish colouring and large size.

### Homona WALKER, 1863

*Homona* WALKER, 1863, List. Lep. Het. Brit. Mus., vol. 28, p. 424. MEYRICK, Proc. Linn. Soc. N.S. Wales, vol. 35, p. 210, 1910. Lepid. Catal., fasc. 10, p. 14, 1912. Gener. Ins., vol. 149, p. 19, 1913; in DE JOANNIS, Ann. Soc. Ent. Fr., vol. 98, p. 710, 1931. WALSINGHAM, Biol. Centr.-Amer., Lep. Het., vol. 4, p. 207, 1913. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 111, 1929.

*Godana* WALKER, 1866, List Lep. Het. Brit. Mus., vol. 35, pp. 1800–1801.

*Ericia* WALKER, 1866, *tom. cit.*, p. 1802.

*Aesioscopa* ZELLER, 1877, Hor. Soc. Ent. Ross., vol. 13, pp. 104–108.

*Anisogona* MEYRICK, 1881, Proc. Linn. Soc. N.S. Wales, vol. 6, pp. 464–465.

*Ericiana* STRAND, 1910, Soc. Ent. Stuttgart, vol. 25, p. 34.

*Capua* (STEPHENS), WALSINGHAM, (*nec* HÜBNER), Ann. Mag. Nat. Hist., ser. 7, vol. 5, p. 482, 1900.

### Key to the Papuan species

1. Males . . . . . 2  
Females . . . . . 6
2. Hind wing dark grey . . . . . 3  
Hind wing orange-ochreous . . . . . 4
3. Fore wing with costa moderately arched, faintly sinuate in middle, termen faintly sinuate above, prominent beneath. . . . . *mermerodes* MEYRICK  
Fore wing with costa strongly arched anteriorly, considerably sinuate posteriorly, termen considerably sinuate, somewhat oblique . . . . . *homogama* MEYRICK
4. Fore wing without costal fold . . . . . *aestivana* WALKER  
Fore wing with costal fold . . . . . 5
5. Costal fold broadly semiovate; costal patch represented by a curved streak from before  $\frac{2}{3}$  of costa to termen above tornus . . . . . *phanaea* MEYRICK  
Costal fold elongate-semiovate; costal patch represented by an elongate-semiovate spot on costa from before  $\frac{2}{3}$  to shortly before apex, with an oblique projection to termen above tornus. . . . . *trachyptera* DIAKONOFF
6. Fore wing with costa abruptly strongly arched at base, straight posteriorly. . . . . *mermerodes* MEYRICK  
Fore wing with costa strongly but gradually curved at base, sinuate posteriorly . . . . . 7



7. Costa slightly sinuate before middle and again on posterior half . . . . .  
 . . . . . *phanaea* MEYRICK  
 Costa deeply sinuate, strongly convex before middle . . . *aestivana* WALKER

***Homona aestivana* (WALKER, 1866) (fig. 223a)**

*Ericia aestivana* WALKER, 1866, List Lep. Het. Brit. Mus., vol. 35, p. 1803.

*Ericia posticana* WALKER, 1866, *tom. cit.*, p. 1803.

*Homona aestivana*, MEYRICK, Proc. Linn. Soc. N.S. Wales, vol. 35, pp. 212-213, 1910, Lepid. Catal., fasc. 10, p. 14, 1912. Gener. Ins., fasc. 149, p. 19, 1913. Trans. Ent. Soc. Lond., vol. 87, p. 505, 1938. DURRANT, B.O.U. & WOLL. Exp., vol. 1, p. 153, 1915. DIAKONOFF, Treubia, vol. 18, p. 37, 1941. Proc. Kon. Nederl. Ak. Wetensch., ser. C., vol. 55, p. 404, 1952.

Distribution: Netherlands New Guinea: Fakfak. British New Guinea: St. Aignan Island; Woodlark Island; Papua: Mafulu, 4000 feet, Kokoda 1200 feet; Base Camp; Utaqua River, 3000 feet. Northwest New Guinea, Mount Malu. Waigeu Island. Misool Island. Philippine Islands (?).

Bernhard Camp, 50 m, August 19, 1939. Bernhard Camp B, 100 m, April 13, 1939. Araucaria Camp, 800 m, March 10-26, 1939. 12 males. The female of this species is not the insect described by MEYRICK as such (*loc. cit.*, 1910); it is much larger, and differs entirely from the female of allied *H. mermerodes* MEYRICK by wing shape. At present two female specimens, one in the present lot and one in the collection of the Berlin Museum, are known to the author; the former specimen may be described as follows.

♀ 39 mm (neallotype). Head ferruginous, suffused with dark brown. Palpus bright orange-ochreous, darker towards apex. Thorax deep ferruginous-brown with blue shine in certain lights. Abdomen pale ochreous, brighter posteriorly. Fore wing with costa strongly arched to before middle, deeply and abruptly emarginate posteriorly, beyond emargination angularly projecting before middle, apex considerably projecting, rounded and slightly falcate, termen sinuate above, broadly rounded and projecting beneath. Deep ferruginous-brown with bluish-leadens gloss; some dull ferruginous-purple, irregular, transverse striae on basal half of costa, largest stria beyond  $\frac{2}{5}$ , sinuate, outwardly oblique, ending in a small elongate-triangular strigula on upper fourth of disc; costal edge dull ferruginous along excavation; some three undulate, slightly outwardly oblique purple strigulae, first parallel to termen, running from apex to tornus, preceded by two shorter strigulae before upper half of termen, all three strigulae connected with each other by an oblique transverse strigula of the same colour in upper third of disc; a crescent short streak beyond these strigulae on upper half of termen, dark purplish-brown. Cilia dark ferruginous (incomplete). Hind wing bright yellow-orange, suffused deep orange towards apex, cilia pale ochreous with ferruginous basal half.

Eighth segment (fig. 223a) in female sclerotized throughout. Ostium broad. Colliculum, a strong, long funnel-shaped tube, obliquely truncate

below. Ductus bursae with about three regular, broad coils, upper two coils moderately sclerotized throughout. Bursa copulatrix ovoid. Signum, a thick knob, without a capitulum, with denticulate inner surface (Slide No. 1350 D, neallotype).



Fig. 223a. *Homona aestivana* (WALKER), female genitalia.

Araucaria Camp, 800 m, March 13, 1939. One specimen, neallotype. The corresponding data and localities and the fact that this is the only *Homona*

species captured during the expedition, confirm our opinion that this is the true female of the present species.

### **Neocalyptis** DIAKONOFF, 1941

*Neocalyptis* DIAKONOFF, 1941, Treubia, vol. 18, p. 407, fig. 2.

The following species is doubtlessly congeneric with *N. telutanda* DIAKONOFF and *N. rotundata* DIAKONOFF, from Java, judging by the male genitalia which are in all three very similar (cf. l.e., pl. 18, f. 5 and pl. 19, f. 2), and also by the facies. However, the neuration in fore wing in the present species is differing in some respects, and the description of the genus must be extended accordingly, as follows:

Fore wing sometimes with a narrow costal fold, without scaletufts, vein 3 from before angle, sometimes from angle, 4 and 5 approximated or almost connate, 7 and 8 stalked, or sometimes separate.

Coremata large. Tegumen erect-triangular. Uncus rather narrow, point long, moderately broad. Socius pending, large. Gnathos slender, long, hook slender, little curved. Transtilla paired, its knobs forming strong, characteristic labides: sclerotized, and with a curved and dentate top. Aedoeagus little curved. Socii, a sheaf of strong spines.

The genus is intermediate between *Epagoge* HÜBNER and *Syndemis* HÜBNER and possibly is also related to *Procalyptis* MEYRICK. Structurally it approaches *Cnephasia* CURTIS, but can be separated by rather short palpi, and stalked veins 3 and 4 in hind wing.

### **Neocalyptis monotoma** spec. nov. (fig. 255)

*μονο* = one, *τέμνω* = to cut

♂ 14 mm. Head, palpus, antenna and thorax pale ochreous. Abdomen ochreous, suffused with grey, venter blackish-fuscous. Legs pale ochreous, suffused with fuscous. Fore wing with vein 3 from angle, 4 and 5 closely approximated at base, 7 and 8 separate; elongate-subovate, moderately broad, broadest in middle, costa with a very narrow fold to beyond  $\frac{1}{3}$ , curved throughout, apex little rounded, termen slightly sinuate, oblique, dorsum rather curved. Pale ochreous, irrorated with brownish-black small dots and transverse strigulae, and with a few fulvous scales. Costal fold suffused with greyish, indistinctly transversely strigulated with darker; central fascia narrow, almost linear, from  $\frac{1}{3}$  of costa to  $\frac{3}{4}$  of dorsum, tolerably straight, anterior edge slightly undulate, with a small angulation in middle; this fascia blackish-brown, posteriorly mixed with bright fulvous, on dorsum suffused with lighter brownish and becoming indistinct; wing before fascia paler, with oblique ill-defined series of sparse blackish points, beyond fascia slightly evenly suffused with greyish, this suffusion somewhat more distinct in middle of disc, and mixed with a few fulvous scales; wing transversely strigulated with minute interrupted brownish-black lines and rows of dots; a small narrow inwardly oblique

streak on end of cell; a larger outwardly oblique transverse blotch before middle of termen; terminal edge with a narrow brownish-black interrupted line, above running before apex to costa. Cilia fulvous, pale ochreous-greyish in tornus. Hind wing pale ochreous, becoming whitish and semi-pelluculent towards tornus, towards apex transversely strigulated with dark grey. Cilia pale ochreous, with a faint greyish antemedian shade, with a grey suffused blotch opposite apex, whitish along lower part of termen, in tornus and along dorsum.

Tegumen erect. Uncus moderate, top rather slender, truncate. Socius rather large, pending. Gnathos slender. Transtilla knob strongly sclerotized, and with a dentate strong labis. Valva rounded, somewhat concave, with a round fold in disc. Vinculum slender. Aedoeagus strong, little curved (Slide No. 504 D, holotype).

Mist Camp, 1800 m, January 12, 1939, January 17, 1939 (holotype). Three specimens.

### **Harmologa MEYRICK, 1882**

*Harmologa* MEYRICK, 1882, New Zeal. J. Sci., vol. 1, p. 277. Trans. New Zeal. Inst., vol. 15, p. 44, 1883. FERNALD, Gener. Tortr. Typ., pp. 44, 61, 1908. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 104, 1929.

*Harmologa* MEYRICK, (part), Proc. Linn. Soc. N.S. Wales, vol. 35, p. 270, 1910. Lepid. Catal., fasc. 10, p. 41, 1912. Gener. Ins., fasc. 149, p. 41, 1913. in DE JOANNIS, Ann. Soc. Ent. Fr., vol. 98, p. 713, 1931. DIAKONOFF, Zool. Med. Mus. Leiden, vol. 121, pp. 127, 183, 1939.

*Trachybathra* MEYRICK, 1907, Trans. New Zeal. Inst., vol. 39, pp. 114, 117 (type *scoliastris* MEYRICK).

For the revised conception of this genus we refer to pages 102–103 of part I of this paper.

The genus is of New Zealandian and Australian distribution. MEYRICK described two species from Papua in later years (*Trans. Ent. Soc. London*, vol. 87, pp. 506 and 507, 1938), material of which we were able to study in the British Museum. The first of this species (*Harmologa athliopa*) was described after a series of one damaged male specimen with head and abdomen missing — tentatively we enclose this species in the following key — and four female specimens which have nothing whatever to do either with the above mentioned male, or with the genus *Harmologa*. The second species, *Harmologa halirrhota*, appears to be a *Schoenotenes*.

### **Key to the Papuan species of *Harmologa***

1. Pale sandy-ochreous; costa anteriorly, and dorsal half of wing suffused with fuscous-grey; no transverse fascia . . . . . *arenicolor* spec. nov.  
     Pale grey, a distinct transverse fascia . . . . . *athliopa* MEYRICK

### ***Harmologa arenicolor* spec. nov. (figs. 226, 227)**

♀ 16 mm. Head pale brownish-ochreous, sides of vertex suffused with fulvous. Palpus very roughly scaled, pale ochreous, densely mixed with

fuscous and fulvous scales, terminal segment fuscous. Antenna pale brownish-ochreous, apical half fuscous. Thorax fulvous-greyish. Abdomen grey, venter bright ochreous. Legs fuscous, posterior fuscous-ochreous. Fore wing broad, ovate-truncate, costa strongly gradually curved to beyond middle, slightly sinuate posteriorly, apex little rounded, termen sinuate, almost vertical above, obliquely rounded beneath. Pale sandy-ochreous, anterior third of costa with a streak of fuscous-grey suffusion, costal edge suffused with fuscous-grey throughout; a cloudy, ill-defined fuscous-grey suffusion along dorsum from before base, dilated posteriorly so as to occupy lower half of wing, less distinct towards termen, transversely strigulated with darker fuscous-grey, this strigulation especially distinct along dorsum; a suffused dark fuscous transverse mark on lower edge of cell; anterior half of wing with transverse, slightly curved rows of rather sparse small, dark fuscous, short strigulae; denser dark fuscous dotting in tornus, and before and along lower half of termen, reaching to vein 6 above; some 3—4 dark fuscous points below  $\frac{4}{5}$  of costa (instead of a costal patch). Cilia fulvous along costa, dark ferruginous-blackish along upper half of termen, pale fulvous with a dark brown antemedian fascia elsewhere. Hind wing with veins 3 and 4 soldered towards base (appearing short-stalked), 5 closely approximated; rather light greyish-fulvous with bronze gloss; cilia pale fulvous-greyish with a pinkish-grey antemedian band.

Ostium cup-shaped. Limen broad, rounded, with small projections at the sides, and an oval opening in middle. Bursa erect, signum dagger-shaped (Slide No. 500 D).

Mountain pass at the foot of Wilhelmina Top, 3800 m, September 2, 1938. One specimen.

### **Diadelomorpha** DIAKONOFF, 1944

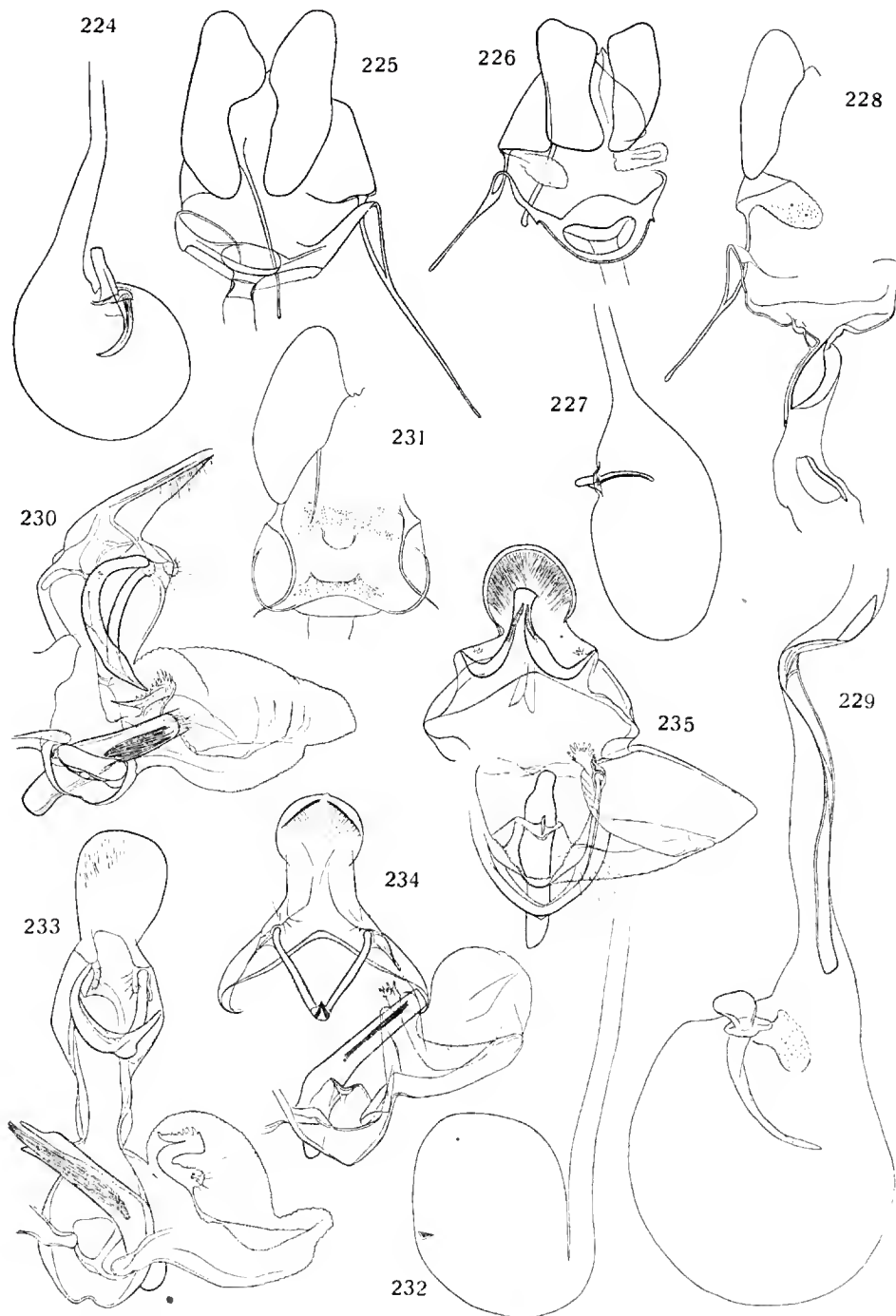
*Diadelomorpha* DIAKONOFF, 1944, Treubia, vol. hors série, p. 47.

The species described below closely agrees with the unique, (probably abnormally developed) specimen of the *typus generis*, *D. undulans* DIAKONOFF, except for two features: vein 7 in the fore wing to termen, not to apex, and the thoracic crest absent. The description of the present genus must be extended consequently. The male specimen of the following species reveals, furthermore, that the genus has no affinity with the group of *Peronea*, as was supposed before, but is a relative of *Cacoecia*, but differing by the porrect palpi, and the stalked veins 6 and 7 in the hind wing. From *Cnephasia* it differs structurally by the peculiar shape and the median costal tuft of cilia in the fore wing of the female, and by the long palpi. *Syndemis curvosa* DIAKONOFF, 1941, from Buru (Moluccas), belongs also to this genus.

### Key to the known species of *Diadelomorpha*

1. Fore wing with transverse fascia absent . . . . . *undulans* DIAKONOFF
- Fore wing with transverse fascia always discernible, sometimes interrupted . . . . . 2





Genitalia of Tortricinae. Fig. 224: *Diadelomorpha clavigera* spec. nov., female, bursa copulatrix. Fig. 225: *idem*, ovipositor and ostium. Fig. 226: *Harmiologa arenicolor* spec. nov., female, ovipositor and ostium. Fig. 227: *idem*, bursa copulatrix. Fig. 228: *Syndemis plumosa* spec. nov., female, ovipositor and ostium. Fig. 229: *idem*, ductus bursae and bursa copulatrix. Fig. 230: *Diadelomorpha clavigera* spec. nov., male. Fig. 231: *Arizelana pyroplegma* spec. nov., female, ovipositor and ostium. Fig. 232: *idem*, bursa copulatrix. Fig. 233: *Anisotenes schizolitha* DIAKONOFF, male. Fig. 234: *Paradiehelia fulvitaeta* spec. nov., male. Fig. 235: *P. clarinota* spec. nov., male.

2. Transverse fascia in fore wing with lower half of posterior edge concave . . .  
 . . . . . *curvosa* DIAKONOFF (Buru)  
 Transverse fascia with lower half of posterior edge strongly convex . . . .  
 . . . . . *clavigera* spec. nov.

**Diadelomorpha clavigera spec. nov. (figs. 224, 225, 230)**

♂ 17 mm. Head dark brown mixed with blackish-grey, face pale ochreous below. Median segment of palpus with lower half deep brown, upper half, and cilia whitish slightly mixed with brown and blackish, basal segment pale ochreous, terminal blackish. Antenna whitish, dark-ringed below, dark brown above. Thorax tawny-brown. Abdomen ochreous-tawny, tinged with greyish, basal segment pale ochreous. Legs pale ochreous, anterior tibia and tarsus infuscated, pale-ringed. Fore wing moderately broad, little dilated posteriorly, base strongly narrowed: costa with a moderate, strongly ciliate fold to  $\frac{1}{3}$ , obliquely curved along this, projecting at  $\frac{1}{3}$ , projection accentuated by a moderate patch of costal cilia, costa slightly concave beyond this, straight before apex, apex subacute, termen hardly concave, oblique. Anterior third of wing whitish, outer edge of this area from before  $\frac{1}{3}$  of costa to slightly beyond middle of dorsum, faintly concave, rounded below fold, and moderately irrorated with dark brown; costal fold with a ferruginous-brown moderate streak along edge of wing, black elsewhere; a triangular, light brownish patch on dorsum before middle, irrorated with dark brown, indicating posterior edge of basal patch; a small brownish-fulvous spot on base of dorsum; posterior  $\frac{2}{3}$  of wing bright ochreous-brown marked dark brown; markings as follows: costa with a moderate semiovalate ferruginous spot beyond  $\frac{1}{3}$ , followed by a smaller one at  $\frac{3}{5}$ , and by three still smaller suffused dots before apex; a faint lilac suffusion along posterior  $\frac{2}{5}$  of costa; two oblique rows of dark brown dots from first costal patch to middle of wing, indicating edges of central fascia; fascia itself is densely dotted and transversely strigulated with deep brown, and abruptly dilated on lower half, reaching from beyond middle of dorsum to tornus; anterior edge of fascia strongly rounded; a few dark brown dots on upper half of wing at, and beyond middle; a curved narrow interrupted deep brown fascia from below costa before  $\frac{1}{4}$  to termen just above tornus, preceded in tornus by a short vertical dark brown line; apical part of wing beyond this fascia regularly transversely strigulated by numerous fine deep brown oblique lines, terminal edge with a deep brown line slightly dentate between veins, apex suffused with reddish. Cilia with basal half white, posterior half dark grey, tips light ochreous, an interrupted suffused antemedian black band, cilia around apex reddish, along costa fulvous. Hind wing bronze-brown; cilia brownish-grey, a pale basal line.

Tegumen moderate. Uncus broad, top erect-ovate. Socius small, pending. Gnathos strong. Transtilla knob rather large, dentate, median projection acute. Valva little folded. Vinculum moderate. Aedoeagus short, little

curved, top truncate. Cornuti, a sheaf of spines (Slide No. 488 D, holotype).

♀ 17—21 mm. Head and thorax somewhat lighter, suffused with grey. Palpus with lower half dark fulvous-brown, upper half pale ochreous densely mixed with dark brown, cilia dark brown, terminal segment dark brown, tip pale ochreous. Antenna fulvous above, pale ochreous below. Abdomen light ochreous suffused with grey. Fore wing elongate, narrower than in male, costa gradually and obliquely curved anteriorly, projecting and with a brush of moderate cilia in middle, concave posteriorly, apex subacute, termen hardly concave, more oblique than in male. Light tawny-fulvous, partially pale ochreous, markings lilac-ferruginous. Basal patch large, edge very oblique, from  $\frac{1}{6}$  of costa to dorsum before middle; this patch lilac-ferruginous, darkest on dorsum, upper third obliterate, with a faint mark on costa indicating edge of patch, and with a dark ferruginous-brown dot below this mark just above cell; central fascia from  $\frac{2}{5}$  of costa to posterior half of dorsum; lilac-ferruginous, somewhat paler above middle of wing, curved and dilated below; anterior edge of fascia from before  $\frac{1}{3}$  of costa to middle of dorsum, slightly sinuate, excavate below fold; posterior edge of fascia suffused, from before  $\frac{2}{5}$  of costa to tornus, with upper third concave, lower  $\frac{2}{3}$  broadly obliquely rounded; space between basal patch and central fascia pale ochreous, irrorated with ferruginous-brown scales; costal patch large, rather dark lilac-ferruginous, from beyond  $\frac{3}{5}$  of costa to apex, finely transversely strigulated with deep brown; anterior edge of patch slightly convex below costa, becoming gradually concave, and tolerably parallel to posterior edge of central fascia below this edge, running to termen above tornus; posterior edge of patch indent, enclosing a triangular spot of more or less suffused ground colour on upper half of termen; this spot reaching above as far as vein 7, finely transversely strigulated with dark brown. Cilia white, opposite apex and tornus suffused with dark grey, an antemedian row of dark brown quadrate dots. Hind wing pale whitish ochreous, apex slightly suffused with darker ochreous, cilia concolorous.

Ostium, a shallow funnel. Limen moderate, submembranous. Colliculum small. Cestum absent. Signum with a moderate curved hook and a long straight capitulum (Slide No. 489 D, allotype).

Moss Forest Camp, 2600—2800 m, October 15, 1938 (holotype and allotype), five km northeast of Lake Habbema, 2800 m, October 13—21, 1938. One male, six females. Closely allied with *D. undulans* DIAKONOFF.

#### **Syndemis Hübner, 1826**

*Syndemis* Hübner, 1826, Verz. bek. Schmett., p. 382. DIAKONOFF, Treubia, vol. 18, pp. 39–40, 1941; *ibidem*, vol. hors série, pp. 44–45, 1944.

#### **Key to the Papuan species**

1. Head and thorax ferruginous . . . . . *erythrothorax* DIAKONOFF  
     Head white, thorax whitish, a median dark fuscous spot, a transverse blackish  
     band . . . . . *plumosa* spec. nov.

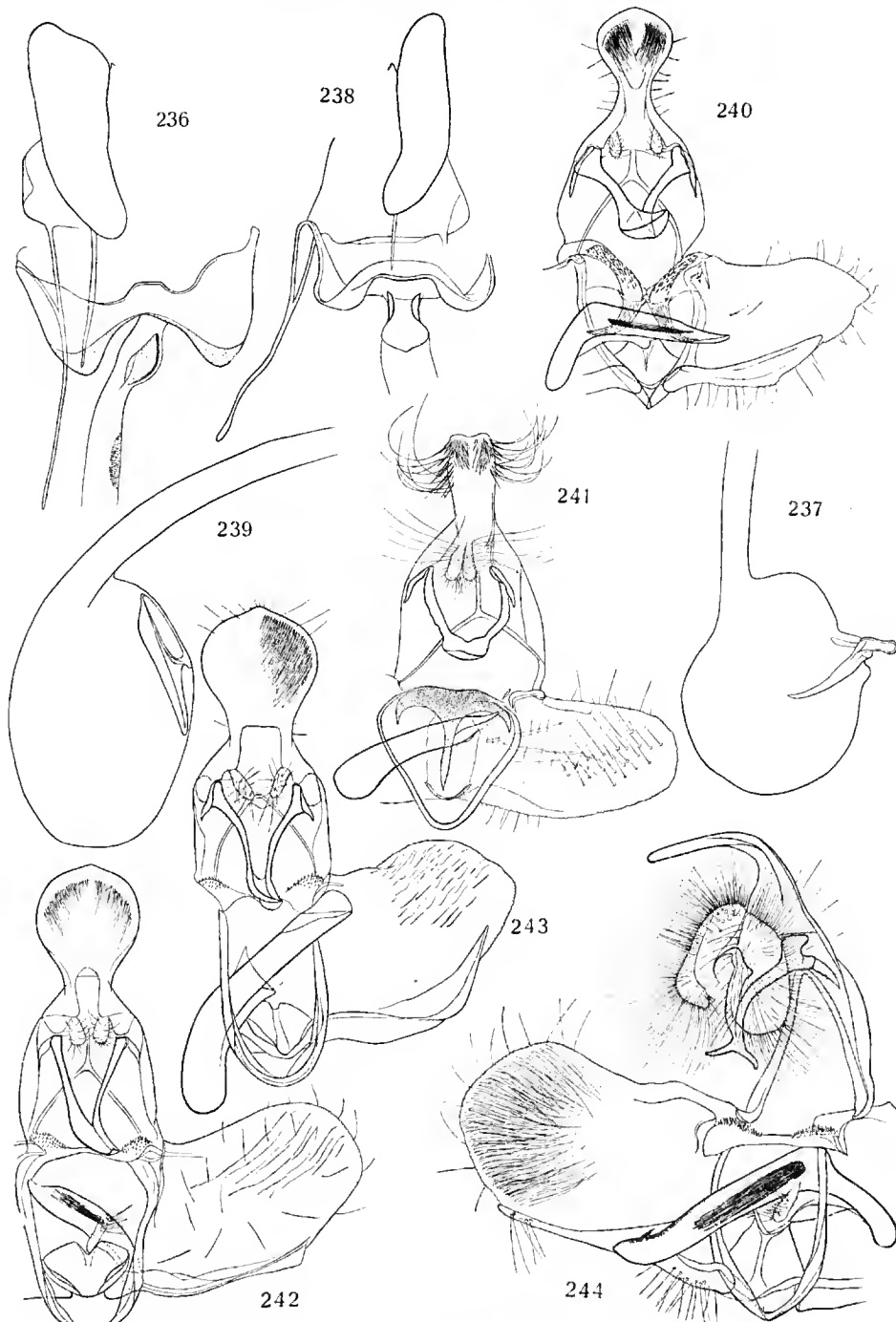


*Syndemis plumosa* spec. nov. (figs. 228, 229)

♀ 19–22 mm. Head white, vertex and collar with a longitudinal median dark grey streak. Palpus white, a large median bright fulvous spot, finely edged below with blackish. Thorax whitish, slightly mixed with blackish and fuscous, a large suffused median dark fuscous-grey spot, a subapical irregular black transverse band, apex whitish. Abdomen ochreous-whitish, suffused with grey above. Legs creamy-whitish, anterior tibia and tarsus dark grey, light-ringed, median tibia and tarsus whitish with grey spots. Fore wing broad, little dilated, costa strongly curved anteriorly, straight posteriorly, apex little rounded, termen scarcely concave above, rounded beneath, moderately oblique. White, irrorated and striped along veins with light grey, markings blackish, partially slightly suffused with orange-ochreous. Basal patch large, interrupted in middle of disc, suffused with dark grey posteriorly, faintly touched with ochreous, strigulated on costa; edge of patch narrow, black, very outwardly oblique, from costa to above fold, interrupted in fold, still more oblique below fold, reaching to middle of dorsum; small black longitudinal streaks: on base of wing above fold, and beyond base below fold; a slightly sinuate series of some seven moderate elongate longitudinal black patches on veins, costal patch subquadrate, touched with ferruginous, dorsal patch at  $\frac{2}{3}$ , longer than others, second patch rounded, suffused with grey, third and fourth patches slightly suffused with orange-ochreous; three blackish irregular streaks between veins 11–8, from upper edge of cell to costa, strongly suffused with dark grey, and slightly with orange-ochreous, each streak ending in a suffused triangular dark grey dot on costa; a point on lower angle of cell and a short streak on fold above dorsum, black; numerous interrupted black streaks and dots between terminal veins, becoming thicker, and more distinct towards tornus: apex and terminal edge slightly suffused with dark grey; costal edge slightly suffused with ferruginous. Cilia white, apical third with suffused light grey spots, basal third with a row of black dots, a blackish patch in tornus. Hind wing whitish, touched with ochreous, apex suffused and marbled with greyish; cilia whitish, touched with ochreous, a greyish antemedian line around apex.

Limen narrow at the sides, much dilated in middle. Ostium shallow, funnel-shaped, strongly sclerotized, with a semitubular elongate-ovate appendix below. Colliculum, a piece of strong chitine. Cestum long, narrow, somewhat tortuous, not dilated below, not reaching bursa. Signum long, narrow, sickle-shaped, smooth; capitulum large, obliquely clavate (Slide No. 431 D, holotype).

Mist Camp, 1800 m, January 17, 1939. Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 19, 1939, October 26, 1939 (holotype). Three specimens. Shows little affinity with other species, except for identical neuration. Also the genitalia are of a somewhat different type. By superficial appearance suggests a *Peronea*.



Genitalia of Tortricinae. Fig. 236: *Carphomigma leontodes* spec. nov., female, ovipositor and ostium. Fig. 237: *idem*, bursa copulatrix. Fig. 238: *Hiceteria heterogona* spec. nov., female, ovipositor and ostium. Fig. 239: *idem*, bursa copulatrix. Fig. 240: *Epagoge conspersa* spec. nov., male. Fig. 241: *Aeolostoma orophila* spec. nov., male. Fig. 242: *Hiceteria stannosa* spec. nov., male. Fig. 243: *Hiceteria heptatoma* spec. nov., male. Fig. 244: *Carphomigma leontodes* spec. nov., male.

**Aeolostoma MEYRICK, 1910**

*Aeolostoma* MEYRICK, 1910, Proc. Linn. Soc. N.S. Wales, vol. 35, p. 182. Lepid. Catal., fasc. 10, p. 6, 1912. Gener. Ins., fasc. 149, p. 11, 1913. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 7, 1929. DIAKONOFF, Zool. Med. Mus. Leiden, vol. 121, pp. 188-189, figs. 5 D, E (head), 5 C (neur.), 7 E (gen. ♀), 1939.

**Key to the Papuan species**

1. Fore wing without transverse fascia and costal patch; longitudinal markings, formed in middle of disc by fuscous-blackish suffusion. . . . . *melanostoecha* spec. nov.
- Fore wing with transverse fascia and costal patch suffused but noticeable; no longitudinal dark markings in disc . . . . . *orophila* spec. nov.

***Aeolostoma melanostoecha* spec. nov. (fig. 218)**

μέλας = black, στήριχος = a line

♂ 14.5-15 mm. Head blackish-fuscous. Antenna blackish-fuscous, finely ringed with grey. Palpus dark greyish-fuscous, paler towards base. Thorax greyish-fuscous, mixed with tawny and blackish-fuscous. Abdomen dark fuscous-grey. Legs dark bronze-grey. Fore wing without costal fold, elongate-triangular, rather narrow, costa moderately curved towards extremities, straight in middle, apex subacute, termen gently concave, very oblique. Costa from base to apex with a narrow blackish streak, somewhat dilated and slightly suffused along apical fifth; costal third also with a broad pale ochreous-whitish streak, gradually moderately dilated to end of cell, angularly narrowed thence to costa before apex, and bearing two projections reaching to edge of wing, and interrupting black costal streak; a narrow streak of light brownish-fulvous suffusion along fold, from base to  $\frac{2}{3}$ ; a narrow longitudinal streak of blackish irroration just above fold from beyond base, interrupted by an elongate white spot beyond  $\frac{1}{3}$ ; thence streak well-defined, running along lower edge of cell, slightly curved upward beyond lower angle, pointing towards apex, reaching to about  $\frac{4}{5}$  of wing breadth; this streak forming lower edge of a longitudinal long white spot; this spot narrow in middle, dilated at anterior extremity to a quadrate spot, posterior extremity cuspidate; a moderate longitudinal streak of blackish irroration below fold from somewhat beyond base to middle of wing; dorsum evenly suffused with fuscous-grey; terminal area with a series of white interneural streaks, veins between these narrowly marked with leaden-grey mixed with fulvous; a marginal row of irregular blackish dots on terminations of veins along termen, from apex to tornus; a submarginal row of similar dots, ill-defined, before lower half of termen. Cilia pale ochreous mixed with fulvous, becoming pale greyish towards termen, basal third fulvous, mixed with black throughout, apical third along costa and around apex dark grey. Hind wing greyish-fuscous, glossy, cilia pale fuscous, with darker fuscous basal band.

Tegumen erect. Uncus moderate, top erect-ovate. Socius elongate, pending. Gnathos moderate, hook long, little curved. Transtilla moderately broad, membranous. Valva narrow, elongate, costa excavate at base, cucullus with a strong scobinate thorn, with a group of long bristles at base. Vinculum strong. Anellus rounded. Aedocagus short, straight. Cornuti, a sheaf of stout short spines. Coremata of seventh segment very large (Slide No. 499 D, paratype).

Serec Valley Camp, 3800 m, September 16, 1938. Three specimens.

*Aeolostoma orophila* spec. nov. (fig. 241)

*ὄρος* = a mountain, *φιλέω* = to like

♂ 14.5 mm. Head and palpus brownish-black. Antenna rather thickened, greyish ringed with black, scape black, apex pale ochreous. Thorax blackish mixed with tawny-fuscous. Abdomen blackish, dark grey towards base, anal tuft large, grey anteriorly, pale ochreous posteriorly. Legs bronze-brown, tibiae blackish ringed with white. Fore wing without costal fold, moderately broad, dilated, costa little curved anteriorly, straight posteriorly, apex subacute, termen hardly concave above, obliquely rounded beneath, rather oblique. Dark grey, marked with ferruginous, scattered with ferruginous and ochreous scales; a moderate basal patch, costa before middle and a broad central fascia, dark grey; central fascia strongly angulate, mixed with ferruginous in middle of disc, suffused above with blackish, below with blackish anteriorly, with fulvous posteriorly; basal patch and central fascia connected along dorsum by a patch of somewhat modified (smaller) light fuscous-grey scales; space between patch and fascia pale whitish-grey, anteriorly and posteriorly narrowly edged with deep ferruginous; costal patch rather ill-defined, triangular, occupying slightly less than third fourth of costa, top on base of vein 6; this patch dark grey scattered with ferruginous scales; costal patch preceded by a moderate pale whitish-ochreous oblique fascia from middle of costa, reaching to dorsum before tornus, suffused anteriorly, and in middle with brighter ochreous, below ill-defined, suffused with fulvous; tornal area suffused with fulvous and dark grey, anterior edge straight, vertical to top of costal patch; apical fourth of wing suffused with blackish-grey, transversely strigulated with deep ferruginous, apex suffused with ferruginous, terminal edge narrowly suffused with blackish, dorsum and posterior half of costa with narrow pale ochreous longitudinal marks. Cilia blackish-grey suffused with ferruginous, apical third light fulvous except opposite apex and along costa. Hind wing dark fuscous-grey, with coppery-bronze gloss; cilia dark fuscous-grey with a blackish antemedian shade.

Tegumen broad. Uncus moderate, elongate, top with long bristles above, strong short bristles beneath. Socius elongate, pending, long-bristled. Gnathos rather small, hook broad. Transtilla strongly sclerotised, broad, extremities curved downward, a long median projection below.

Valva short, ovate. Vinculum slender. Aedocagus rather short, little curved; cornuti not perceptible (Slide No. 498 D).

Letter Box Camp, 3600 m, September 5, 1938. One specimen. The somewhat thickened antenna and the peculiar shape of the male genitalia show little relation with the preceding species; it seems to be a true *Acolostoma*, nevertheless, judging by the neururation and the entire facies of the insect.

**Hiceteria** gen. nov. (fig. 245)

*ἵκετήριος* = asking for help

Head with rather short little appressed scales, face densely scaled. Ocellus posterior. Proboscis short and weak. Antenna in male short-ciliate, in female minutely ciliate. Palpus rather long, in male subascending, slender, median segment covered with closely appressed scales, dilated posteriorly, broadest at  $\frac{3}{4}$ , lower edge tolerably straight, upper gradually

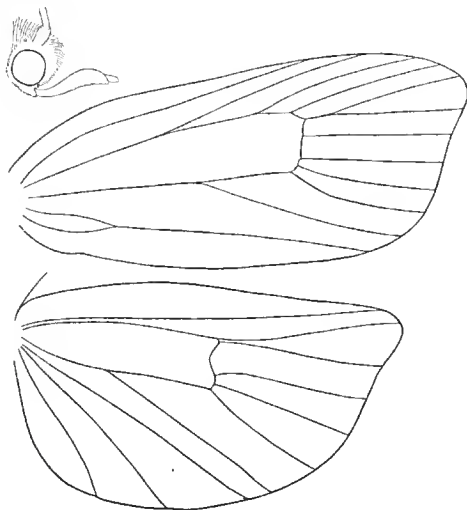


Fig. 245: *Hiceteria heptatoma* gen. nov., spec. nov., male, wing neururation and head.

curved, terminal segment moderate, obtuse; palpus in female slightly drooping, median segment with roughly projecting scales above, rather smooth beneath, terminal segment moderate, slightly drooping. Thorax without crest, or with a very slight crest. Fore wing without costal fold, 2 from  $\frac{2}{3}$ , 3 from angle, 3–5 separate, rather remote, equidistant, 5 parallel, 7 and 8 short-stalked, 7 to termen, 10 from  $\frac{4}{5}$ , 11 from  $\frac{1}{2}$ . Hind wing without cubital pecten, with a moderate pencil of hairs on base of vein 1b above, 2 from before middle, 3 from angle, 3–5 separate, more or less approximated at base, 6 and 7 closely approximated towards base or stalked.

Uncus with a broad, rounded top. Socius small. Valva simple, broadly



semiovate. Transtilla complete (single), dentate at the sides. Cestum absent. Signum a hollow dentate thorn, or absent.

Typus generis *Hiceteria heptatoma* spec. nov., male.

Intermediate between *Pyrgotis* MEYRICK and *Catamacta* MEYRICK, nearest to the first named, distinct by absence of costal fold in male, and not crested or but slightly crested thorax; from the last named genus it can be discriminated by subaseending palpus in male and by vein 2 in fore wing originating distinctly before middle of lower edge of cell, instead of from far beyond middle, viz. from  $\frac{3}{5}$ , as in the type of that genus, *Catamacta gavisana* WALKER. Also closely allied to the following genus, but differing by the shape of palpi and by the absence of a well-developed double thoracic crest.

#### Key to the species of *Hiceteria*

1. Fore wing with 6-7 spindle-shaped, oblique, silvery transverse streaks . . .  
     . . . . . *heptatoma* spec. nov.  
     Not thus . . . . . 2
2. Hind wing in female dark fuscous-grey (male with metallic dots before apex  
     and along termen) . . . . . *stannosa* spec. nov.  
     Hind wing in female pale fuscous retinate with dark grey (male unknown).  
     . . . . . *heterogona* spec. nov.

#### *Hiceteria heptatoma* spec. nov. (figs. 243, 245)

ἑπτά = seven, τέμνω. = to cut

♂ 29-32 mm. Head, palpus and antenna deep fuscous-brown. Thorax without crest, dark brown. Abdomen pale ochreous-fuscous, segments with posterior transverse fuscous bands, becoming broader posteriorly, anal segment with a dark fuscous triangular patch, anal tuft pale ochreous, venter brighter ochreous. Legs ochreous; anterior suffused with dark brown. Fore wing elongate-subovate, moderately broad, dilated, costa moderately curved anteriorly, less curved posteriorly, (appearing slightly concave before middle because of roughish costal cilia along posterior part), apex subacute, termen hardly concave in middle, almost straight, considerably oblique. Deep lilac-brown, faintly transversely strigulated with ferruginous, suffused with dark coffee-brown except along costa, in apex and along terminal edge; markings silvery-white, glossy. A moderate oblique streak on base below fold, somewhat diverging from base of dorsal margin; six oblique tolerably parallel transverse more or less sinuate moderate spindle-shaped fasciae in disc, from rather below costa to above dorsum, acute at extremities, narrowly edged with ferruginous alternately anteriorly and posteriorly, i.e. first one edged anteriorly, second one edged posteriorly, etc.; first fascia almost straight, second sinuate, third interrupted above middle, with upper part curved; fourth fascia longest, almost to tornus, inwardly sinuate, slightly diverging from fifth, which is outwardly sinuate, small; space between fourth and fifth fasciae somewhat

suffused with ferruginous, sixth fascia minute, in apex, sometimes absent. Cilia deep fuscous-brown, apical fourth tinged ferruginous, base paler fuscous. Hind wing with veins 6 and 7 closely approximated towards base; light tawny-fuscous, suffused with darker fuscous towards edge, cilia pale fuscous, darker along basal half, paler than hind wing.

Uncus broadly rounded. Socius moderately broad. Hook of gnathos moderate. Transtilla linear in middle, lateral knobs broad. Valva broad, sacculus to beyond  $\frac{3}{4}$ . Aedoeagus rather long (Slide No. 622 D, holotype).

Lake Habbema, 3250–3300 m, August 7, 1938 (holotype). Moss Forest Camp, 2800 m, October 9–November 5, 1938. Two males. A conspicuous species with uncommon markings.

***Hiceteria heterogona* spec. nov. (figs. 238, 239)**

*έτερο* = different, *γων* = angle

♀ 27 mm. Head and thorax deep ferruginous, face fuscous. Thorax with a very slight crest. Palpus fulvous. Antenna ferruginous, flagellum fuscous except at base. Abdomen greyish-ochreous, suffused with dark grey. Legs light ochreous, anterior and median tibia and tarsus dark fuscous, ringed with ochreous. Fore wing broad, elongate-triangular, considerably dilated, costa gradually much curved anteriorly, less curved posteriorly, apex obtusely pointed, slightly prominent, termen slightly sinuate above, rounded beneath, little oblique. Brownish-fuscous, touched with lilac, densely suffused with deep ferruginous-brown, and bright ochreous-yellow, marked and retinate with ferruginous and dark brown. Costa with a regular series of wedge-shaped moderate transverse ferruginous streaks, not reaching cell, alternating with small dots; a large triangular spot on costa posteriorly, deep ferruginous finely transversely strigulated with glossy dark grey, reaching along costa from beyond middle to before apex; top of this patch suffused dark grey, reaching to lower angle of cell, preceded by a faint deep ochreous suffusion in middle of disc, and followed by a small rounded ochreous-yellow spot between bases of veins 5–6, and by a faint cloud of yellowish-ochreous suffusion in middle of disc; this suffusion connected with top of a bright fulvous, triangular suffusion situated in tornus, and in lower half of termen, which is distinctly edged anteriorly by a triangular spot of ground colour on dorsum just before tornus; dorsum with a sharply edged elongate-triangular spot of ground colour, with base from before  $\frac{1}{4}$  to  $\frac{3}{4}$  of dorsum and with top almost to middle of disc at  $\frac{1}{3}$ ; posterior edge of spot slightly concave, anterior edge straight, surrounded by a deep ferruginous-brown suffusion not reaching above middle of disc, and preceded by an elongate dark suffusion above dorsum not reaching base of wing; transverse deep ferruginous strigulation, more distinct before termen; termen slightly suffused with lilac-grey. Cilia deep tawny-fulvous, costal cilia barred with ferruginous. Hind wing with veins 6 and 7 stalked; glossy light fuscous-greyish, faintly marbled

with darker grey, cilia light greyish-ochreous, with a narrow dark grey antemedian line.

Ostium broad, shallow. Limen curved downward at the sides, narrow, little curved in middle. Cestum strong, short, forming a cordiform lobe below. No cestum. Bursa copulatrix ovoid. Signum robust, wedge-shaped, without capitulum (Slide No. 619 D).

Moss Forest Camp, 2600–2800 m, October 9–November 5, 1938. One specimen.

***Hiceteria stannosa* spec. nov. (figs. 220, 242)**

♂ 17 mm. Head deep ferruginous. Palpus light fuscous. Antenna blackish, flagellum faintly ringed with pale grey. Thorax with a very slight crest; dark brown, suffused with ferruginous in middle anteriorly. Abdomen ochreous-greyish. Legs pale ochreous-greyish, anterior and median legs suffused with blackish, light-ringed. Fore wing elongate-subtruncate, moderately dilated, costa curved throughout, more so anteriorly, apex subaeute, termen slightly concave above, moderately oblique. Deep coffee-brown, slightly suffused with light brown, marked with numerous round silvery-leadens glossy dots with bluish iridescence, partially confluent. A rather ill-defined oblique silvery-leadens moderately broad transverse fascia from before  $\frac{1}{4}$  of costa to  $\frac{3}{5}$  of dorsum, slightly narrowed on costa, with edges irregularly-undulate; another similar fascia from costa slightly beyond middle to dorsum before tornus, gradually dilated in middle; base of wing throughout and upper half of wing between those fasciae dotted with silvery-leadens; middle of dorsum to fold slightly suffused with light brown; a slightly curved inwardly oblique small shining silvery-white patch just beyond cell, between veins 5–6; apical fourth of wing gradually densely dotted with glossy silvery-leadens, these dots larger and brighter along margin of wing, running along termen and tornus to base of second transverse fascia; subterminal and tornal areas slightly suffused with light brown. Cilia ochreous-fulvous, fuscous in apex, basal half deep reddish-brown throughout. Hind wing with veins 6 and 7 stalked; pale fuscous-greyish faintly dotted with greyish along costa, and in apex, cilia pale fuscous-greyish, tinged brownish towards base.

Uncus somewhat narrower than in *H. heptatoma*. Socii broader. Hook of gnathos longer. Transtilla broader in middle, lateral knobs narrower. Valva somewhat narrower, sacculus to  $\frac{2}{3}$ . Aedoeagus shorter (Slide No. 620 D, holotype).

♀ 22 mm. Head and palpus deep reddish-fulvous, terminal segment of palpus light ochreous, extreme tip ferruginous. Antenna deep ferruginous, scape fulvous. Thorax greyish-lilac, suffused with ferruginous anteriorly. Abdomen dark lilac-grey, darker posteriorly, venter greyish-ochreous. Legs greyish-ochreous, anterior and median suffused with dark fuscous above, with lighter articulations. Fore wing elongate-truncate, little dilated, broadest in middle, costa strongly curved anteriorly, less curved



posteriorly, apex prominently rounded, termen scarcely sinuate, little oblique. Fuscous-lilac-grey, glossy, suffused and marked with dull dark brown, markings narrowly edged with deep ochreous. Costal edge narrowly ochreous, anterior half of costa with moderate transverse streaks, alternating with two-three small dots; a large cloudy, posteriorly ill-defined triangular spot along apical half of costa to before apex, densely scattered with about four rounded glossy leaden-grey dots, larger similar dots along costa; top of this triangular spot somewhat rounded-clavate, reaching to disc beyond cell, followed by a small sharply edged inwardly oblique, erect-ovate pinkish spot; this spot constricted below middle and followed by deep brown suffusion reaching halfway towards termen and tornus; the latter finely transversely strigulated with ferruginous; a large tooth-shaped triangular patch of ground colour on second fourth of dorsum, reaching above middle of disc, anterior edge deeply sinuate and preceded by a blackish brown suffusion above dorsum not reaching base of wing; posterior edge of patch gradually curved, followed by a transverse oblique broad streak of ferruginous-brown suffusion from  $\frac{1}{3}$  of wing to above dorsum, dorsum faintly suffused with dark grey. Cilia deep fulvous, basal half slightly darker. Hind wing with veins 6 and 7 stalked; rather dark fuscous-grey; cilia lighter, greyish, with dark grey base and a narrow light basal line, basal pencil of hairs dark grey, with base pale ochreous.

Ostium and limen like those in preceding species, but limen in middle broader, less distinctly forming a rim. Colliculum longer, not dilated below. Cestum and signum absent (Slide No. 621 D, allotype).

Mist Camp, 1800 m, January 9, 1939 (holotype, male), January 10, 1939 (allotype, female). Two specimens. Closely allied to preceding.

**Carphomigma** gen. nov. (fig. 246)

*καρπος* = straw, *μῆγμα* = a mixture

Head with appressed scales. Eye large. Ocellus posterior. Antenna moderately ciliated in male (ciliations under 1), in female with one short cilium on each segment. Palpus moderately long in male, rather long in female, porrect, median segment sinuate, with rather smoothly appressed scales above, with projecting scales towards apex beneath, forming a wedge-shaped moderate tuft, terminal segment rather long, subclavate. Thorax with a small double posterior crest. Fore wing without costal fold in male, without raised scale-tufts, 1b furcate, 2 from slightly beyond middle, 3 from angle, 3–5 separate, equidistant, 5 parallel, 7 and 8 short-stalked, 7 to termen, 11 from slightly before middle. Hind wing without cubital pecten, with a long pencil of hairs on base of vein 1b above, 2 from  $\frac{3}{5}$ , 3 and 4 short-stalked in male, connate in female, from angle, 5 closely approximated at base, 6 and 7 short-stalked.

Uncus with a narrow top. Socius large, pending. Valva simple, broadly semiovate. Transtilla complete, dentate at the sides. Cestum absent. Signum dagger-shaped.

Typus generis *Carphomigma leontodes* spec. nov., male, female.

Closely allied to *Pyrgotis* MEYRICK and *Catamacta* MEYRICK, differs from both by palpus, absence of costal fold and short-stalked veins 3 and 4 in hind wing in male, from last named genus also by presence of a double thoracic crest and subascending palpi. Also closely allied to the preceding genus.

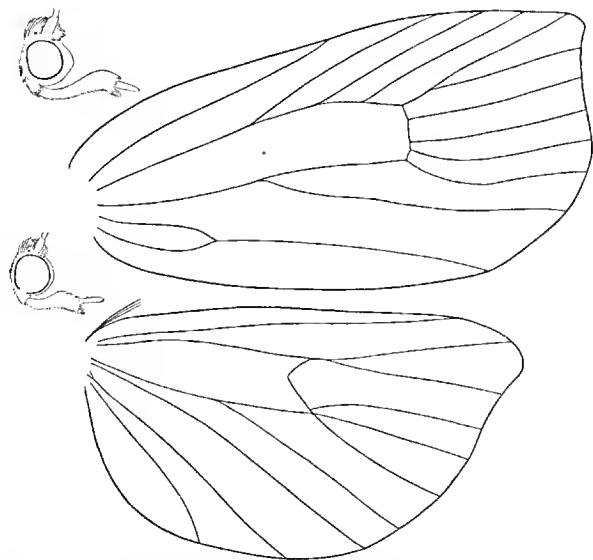


Fig. 246: *Carphomigma leontodes* gen. nov., spec. nov., female, wing neuration and head (above); male, head (below).

***Carphomigma leontodes* spec. nov. (figs. 236, 237, 244, 246)**

*λεοντώδης* = like a lion

♂ 23 mm. Head tawny-ochreous, slightly mixed with fulvous, face paler. Palpus ochreous densely mixed with fulvous except towards base, terminal segment ochreous-fuscous. Antenna ochreous, fulvous-ringed. Thorax light ochreous, suffused with fulvous anteriorly, whitish-ochreous posteriorly. Abdomen pale ochreous, tegumen mixed with dark grey above, valva with a median, and an apical dark grey transverse streaks, venter ochreous; suffused with reddish-fulvous laterally. Legs ochreous, above dark fuscous, ringed with ochreous. Fore wing broad, elongate-subtruncate, dilated; costa curved throughout, somewhat less curved before middle, apex obtusely pointed, hardly prominent, termen gently sinuate, broadly rounded, slightly prominent below, vertical. Light ochreous, densely suffused with tawny-fulvous, more so in middle of disc, rather gradually strigulated with outwardly curved interrupted fulvous-brownish indistinct strigulae. Basal patch represented by an irregular indistinct dark fuscous suffusion on base of disc, more extended below fold, with an indication of an acute oblique projection above fold, pointing towards costa beyond base; costa with elongate fulvous-fuscous small dots:

three moderate dots along basal third, three elongate spots alternating with small points along posterior third; a cloudy, rather ill-defined triangular patch before middle of costa, slightly outwardly oblique, reaching  $\frac{1}{3}$  across wing; this patch greyish, with a faint suffused edge, lighter ochreous in middle below costa, dark fuscous along costa; a rather conspicuous moderate preterminal elongate-ovate somewhat obliquely-transverse blackish-fuscous spot between veins 4—6, connected by about four less distinct outwardly oblique series of blackish-fuscous points with costa, and by about four somewhat more distinct inwardly oblique rows of slightly larger points with dorsum before tornus and with tornus; a row of minute dark points along termen from costa before apex to tornus, furcate above and embracing apex; dorsum with a row of somewhat inwardly oblique transverse fuscous marks. Cilia ochreous, slightly barred and mixed with fulvous, basal half bright fulvous, with a narrow ochreous basal line, widening towards tornus. Hind wing pale ochreous, faintly marbled with greyish, glossy; cilia pale ochreous, mixed with dark grey around apex; a dark grey vertical blotch on costa before apex; cilia elsewhere with basal half brighter ochreous, faintly barred with grey, towards tornus with a grey antemedian line.

Tegumen somewhat erect. Uncus narrow. Socius very large, pending. Gnathos moderate, hook bifid. Transtilla complete, moderately broad, laterally dilated, and dentate above. Valva broadly elongate, cucullus rounded, sacculus to  $\frac{3}{4}$ . Aedoeagus slender, pistol-shaped, a recurved tooth below top. Cornuti, a sheaf of spines (Slide No. 623 D, holotype).

♀ 34 mm. Head, palpus, antenna and thorax ochreous-tawny. Abdomen light greyish-ochreous, anal tuft ochreous, venter laterally suffused with reddish-fulvous, and mixed with dark fuscous, a dark fuscous moderate patch on middle of posterior half of each ventrite. Fore wing broader and more dilated than in male, costa strongly curved at base, slightly prominent at  $\frac{1}{6}$ , less curved posteriorly. Rather unicolorous light ochreous-tawny, faintly transversely strigulated with light greyish-fuscous; costal dots greyish-fuscous, smaller, rounded, triangular patch very faint, fuscous, preterminal spot distinct, rounded, smaller, transverse rows of dark points scarcely perceptible; dorsum with a faint greyish suffusion along basal half and an elongate suffused faint greyish spot before tornus, elsewhere dorsal edge indistinctly dotted with greyish. Cilia ochreous-tawny, an antemedian, and a postmedian faint fulvous line. Hind wing as in male, more distinctly retinate with pale grey, cilia pale ochreous, with two pale grey lines, darker towards tornus, blotch on costa less distinct.

Ostium wide. Limen broad, erect pocket-like dilatations at the sides, middle somewhat projecting. Colliculum, a concave sclerotization. Small sclerotization below this, probably indicating cestum. Bursa copulatrix obliquely pear-shaped. Signum moderate, capitulum rather long (Slide No. 624 D, allotype).

Top Camp, 2100 m, February 2, 1939 (holotype, male). Lake Habbema,

3250—3300 m, August 25, 1938 (allotype, female). One male, one female.

*Arizelana* gen. nov. (figs. 247, 248)

$\alpha\rho\iota\zeta\eta\lambda\omicron\varsigma$  = shining

Head with dense long appressed scales, on vertex forming flattened tufts partially encircling base of each antenna. Ocellus posterior. Proboscis rather weak. Antenna ciliate in male, ciliations under 1. Palpus moderate, porrect, strongly dilated by rough projecting scales above and beneath, median segment appearing almost circular, terminal segment short, pointed. Thorax without crest. Fore wing with costal fold, without raised scale-tufts; 1b furcate; in male cell narrow, 2 from  $\frac{3}{5}$ , 3 from considerably before angle; in female cell broader, 2 from  $\frac{2}{3}$ , 3 from rather before angle;

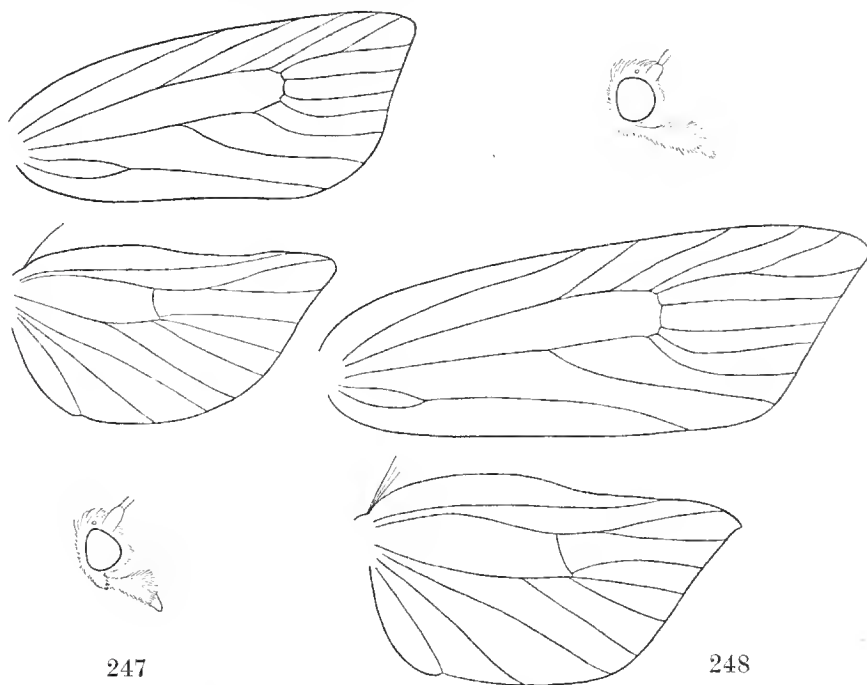


Fig. 247: *Arizelana margaritobola* gen. nov., spec. nov., male, wing neuration and head. Fig. 248: *A. pyroplegma* spec. nov., female, wing neuration and head.

4 from angle, 5 parallel, 7 and 8 long-stalked, 7 to termen, 9 near to stalk, 11 from middle, in female from before middle. Hind wing without cubital pecten, 2 from  $\frac{2}{3}$  in male, from  $\frac{3}{4}$  in female, 3 distinctly before angle in male, slightly before angle in female, 4 from angle, 5 closely approximated, 6 and 7 stalked.

Typus generis *Arizelana margaritobola* spec. nov., male.

Perhaps nearest to *Aristocosma* MEYRICK, but differing in absence of thoracic crest, little ciliated antennae and broad hind wings, with vein 3 from only slightly before angle.

. Key to the species of *Arizelana*

1. Ground colour shining snow-white . . . . . *margaritobola* spec. nov.  
Ground colour pale yellowish-ochreous, retinate or irrorated with orange . . . . . 2
2. Palpus moderate, median segment strongly dilated with roughly projecting scales above and beneath . . . . . *pyroplegma* spec. nov.  
Palpus rather long, median segment moderately dilated posteriorly with roughly appressed scales . . . . . *bibatrix* spec. nov.

***Arizelana margaritobola* spec. nov. (figs. 247, 251)**

*μαργαρίτης* = a pearl, *βάλλω* = to throw

♂ 10.5–13 mm. Head deep yellowish-ochreous. Palpus chestnut-brown, a longitudinal streak above middle of median segment and extreme tip of terminal segment pale ochreous. Antenna pale ochreous, ringed with reddish-fulvous. Thorax deep fulvous mixed with bright fulvous and white scales, centre white? (damaged). Abdomen dark grey, basal segment white, anal pale ochreous, anal tuft pale ochreous. Legs pale ochreous, anterior and median infuscated and pale-ringed above. Fore wing elongate-triangular, rather narrow, with a narrow costal fold to before  $\frac{1}{3}$ , its edge smooth, costa moderately curved throughout, apex obtuse, termen faintly concave in middle, little rounded below, rather oblique. Snow-white, markings deep fulvous, edged with bright fulvous and suffusedly with pale yellow, scattered with round patches of leaden-grey shining scales. Basal patch moderate, its edge slightly inwardly oblique, almost straight, with a small rounded projection above middle of disc and a smaller excavation above this, deep fulvous, paler fulvous towards costa and edge; extreme base of dorsum whitish, sometimes connected with an ovate inwardly oblique white spot beyond base of costa not reaching edge of wing; a transverse, erect-triangular irregular white spot on basal patch posteriorly, leaving a rather broad edge of fulvous colour along dorsum, and along posterior margin of basal patch; all edges of white markings suffused with pale yellow; posterior  $\frac{3}{5}$  of wing deep fulvous, paler towards edges except in tornus; anterior margin of thus coloured area from just beyond  $\frac{1}{4}$  of costa to  $\frac{1}{5}$  of dorsum, faintly serrate, straight above, slightly concave and vertical above dorsum, edged throughout with pale yellow suffusion; containing three large snow-white spots: first on costa rather beyond middle, almost circular, faintly edged with pale yellow suffusion; second between first and tornus, circular; third about twice as large, elongate-ovate, slightly constricted in middle, along and just before terminal edge from below apex to vein 4, space between second and third spots light fulvous; patches of leaden-grey shining scales: before, below and beyond first circular white spot, first patch small, second and third patches transversely elongate, third reaching to costa; fourth shining patch elongate, vertical, connecting second white spot with dorsum before tornus; a row of some four small round shining dots in tornus and along lower third of termen. Cilia glossy light yellow, dark fuscous on costa



before apex, infuscated on dorsum. Hind wing white, terminal veins faintly tinged pale yellow; cilia very pale yellow, white in tornus and on dorsum.

Tegumen moderately erect. Uncus with top rather narrow, hooked, rounded. Socius moderate, rounded, little pending. Gnathos slender, hook thickened. Transtilla complete, moderately broad, straight, little dilated laterally. Valva elongate, with costa somewhat concave, cucullus rounded, sacculus weak, almost 1, a blunt broad tooth before middle above. Vinculum small. Aedoeagus little curved. Cornuti, a sheaf of spines (Slide No. 469 D, holotype).

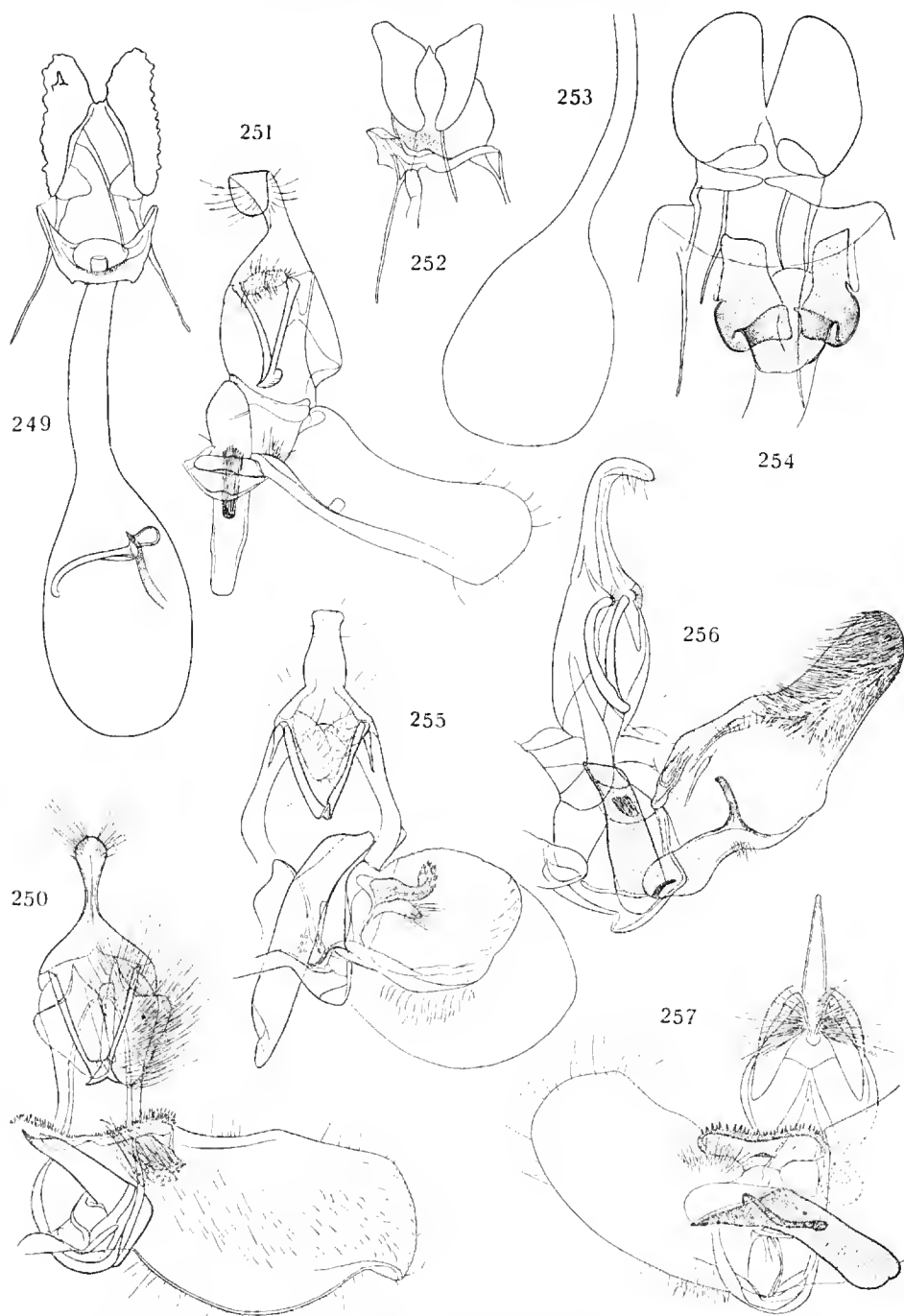
Rattan Camp, 1200 m, February 19, 1939, holotype. Sigi Camp, 1500 m, February 17, 1939. Three males.

***Arizelana pyroplegma* spec. nov. (figs. 231, 232, 248)**

$\pi\tilde{\alpha}\rho$  = fire,  $\pi\lambda\acute{\epsilon}\gamma\mu\alpha$  = a net

♀ 14–17 mm. Head deep yellowish-ochreous mixed with fulvous, face fulvous. Palpus strongly dilated with roughly projecting scales; yellowish-ochreous, densely irrorated with fulvous except along upper and lower edge and at extreme tip. Antenna pale ochreous, scape mixed with fulvous-brown, flagellum ringed with fulvous-brown along basal sixth, with dark brown elsewhere. Thorax deep chestnut-brown, anteriorly and posteriorly suffused with orange-fulvous. Abdomen whitish-ochreous, basal segment white, anal tuft light ochreous. Legs pale yellow, anterior and median legs tinged with fulvous, suffused with deep chestnut-brown above, pale-ringed. Fore wing elongate, little dilated, costa curved anteriorly, straight posteriorly, apex subacute, termen faintly concave in middle, considerably oblique. Pale golden-ochreous, regularly densely marbled and retinate with bright fulvous-orange, markings deep ferruginous-brown. An oblique moderate streak from base of wing to costa beyond base; base of costa transversely strigulated with dark brown; a small transverse inwardly oblique mark on  $\frac{1}{5}$  of dorsum; a narrow straight transverse fascia from  $\frac{2}{5}$  of costa to dorsum before tornus, slightly extended along costa, abruptly narrowed along lower half, with a curved branch from above middle of its length to costa at  $\frac{3}{4}$ ; this branch continued along wing edge posteriorly so as to form a marginal fascia along costa, apex, termen, and in tornus, reaching to base of transverse fascia; this marginal fascia rather narrow, slightly thickened along lower half of termen and in tornus; a transverse striga of denser orange retination from costa before apex to termen above middle; shining dark grey rounded moderate spots: one on transverse fascia below costa, two on its branch, and about three on marginal fascia in tornus. Cilia pale yellow, fulvous in apex, fuscous in tornus. Hind wing white, posterior half touched with pale yellowish, cilia white, basal half pale yellowish.

Ostium slightly sclerotized. Limen narrow at the sides, membranous



Genitalia of Tortricinae. Fig. 249: *Nikolaia melanopsigma* spec. nov., female. Fig. 250: *idem*, male. Fig. 251: *Arizelana margaritobola* spec. nov., male. Fig. 252: *Aplastoceros plumbata* spec. nov., female, ovipositor and ostium. Fig. 253: *idem*, bursa copulatrix. Fig. 254: *Taeniarchis acrotoma* spec. nov., female, ovipositor and ostium. Fig. 255: *Neocalyptis monotoma* spec. nov., male. Fig. 256: *Pandurista encarsiotoma* spec. nov., male. Fig. 257: *Arctephora iubata* spec. nov., male.

in middle. Colliculum and cestum absent. Signum a minute, triangular sclerotisation. Anapophyses very short, curved (Slide No. 470 D, holotype).

Mist Camp, 1800 m, January 9, 1939. Iebèlè Camp, 2250 m, December 3, 1938 (holotype). Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 8 and 26, 1938. Four females. Closely allied to preceding.

*Arizelana bibatrix* spec. nov. (figs. 221, 222)

♀ 15 mm. Head pale ochreous, face slightly mixed with brownish. Palpus moderately dilated posteriorly with roughly appressed scales; chestnut-brown, median segment with basal half whitish above. Antenna pale ochreous, scape mixed with brownish, flagellum brownish-ringed. Thorax light yellowish-ochreous, tegula mixed with orange. Abdomen light golden-ochreous, basal segment whitish. Legs pale ochreous, anterior leg infuscated above, light-ringed. Fore wing elongate-ovate, little dilated, costa gradually curved anteriorly, faintly convex before apex, apex rounded, slightly projecting, termen moderately sinuate, little oblique. Pale ochreous, densely dotted with bright fulvous-orange, markings fuscous and dark ferruginous-brown. Basal patch moderate, suffused with fuscous and ferruginous-brown; an elongate-triangular, moderate patch on costa before middle, dark brown, centred with greyish, connected by a rather narrow slightly curved fascia with  $\frac{3}{4}$  of dorsum, and by a moderately broad, little curved posterior branch from its middle, with costal patch; this patch semioval, brownish mixed with fulvous, dotted with moderate round dark leaden-grey shining spots, three dark brown dots along costa; a moderately broad deep ferruginous-brown marginal fascia from costal patch along apex, termen and tornus reaching to base of central fascia. Cilia pale grey, basal half darker lilac-grey. Hind wing white, posterior half suffused with yellowish-ochreous, cilia whitish.

Ostium with rim somewhat projecting ventrally. Limen rounded laterally, straight in middle, moderately broad, little sclerotised. Ductus bursae very long, colliculum and cestum absent. Bursa copulatrix small. Signum a moderate transverse seobinate plate (Slide No. 471 D).

Iebèlè Camp, 2250 m, November 19, 1938. One, rather damaged specimen. Allied to preceding.

*Aphthonocosma* spec. nov. (fig. 258)

*ἄφθονος* = rich, *κόσμα* = a gem

Head rather roughly scaled. Ocellus posterior. Proboscis short, weak. Antenna pubescent in female, scape short (apical part missing). Palpus moderate, subascending, median segment thickened with appressed scales, hardly dilated posteriorly, terminal segment short, thickened, obtuse. Maxillary palpus obsolete. (Thorax damaged.) Posterior tibia clothed with rather short, roughish scales above. Fore wing elongate-truncate, 2 from  $\frac{2}{3}$ , 3 from angle, remote from 4, 4 moderately approximated to 5, 7 and 8 stalked, 7 to termen, 11 from slightly before middle, discoidal weak

between 5 and 7 + 8. Hind wing without cubital pecten; elongate-semiovate, under 1, cilia  $\frac{1}{7}$ ; 2 from  $\frac{2}{3}$ , 3 from angle, 3—5 separate, 4 closer to 3 than to 5, 6 and 7 connate, gradually diverging, 8 from base, straight, parallel.

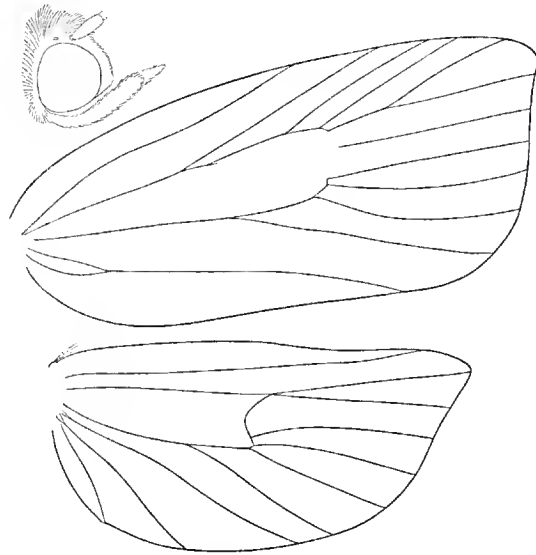


Fig. 258: *Aphthonocosma plutarcha* gen. nov., spec. nov., female, wing neuration and head.

Typus generis: *Aphthonocosma plutarcha* spec. nov., female.

A peculiar form, structurally nearest to *Enoditis* MEYRICK, 1912, from eastern Siberia, but in fact not related to it.

***Aphthonocosma plutarcha* spec. nov. (figs. 258, 259)**

$\pi\lambda\omicron\upsilon\tau\acute{\epsilon}\omega$  = to be rich,  $\alpha\gamma\chi\omicron\varsigma$  = leader

♀ 20 mm. Head dark brownish-fuscous, face mixed with yellowish-ochreous (damaged). Palpus pale yellowish-ochreous, median segment suffused with fulvous posteriorly, and mixed with fuscous above. Antenna dark brown, scape yellowish-ochreous (imperfect). Thorax blackish-fuscous (damaged). Abdomen dark fuscous, venter and legs light ochreous. Fore wing broad, elongate-truncate, moderately dilated. Costa moderately curved throughout, more so anteriorly, apex almost rectangular, termen hardly sinuate, rounded beneath, slightly oblique. Deep ferruginous-fuscous. Upper half of wing from base to slightly beyond middle, and from costa to just above fold, ochreous-orange, slightly suffused with reddish-fulvous, regularly irrorated with dark fuscous; a moderate sub-rectangular transverse, slightly outwardly oblique, pale whitish-yellowish spot, somewhat before  $\frac{3}{5}$  of costa, reaching to cell; another similar spot, smaller, furcate above, on costa just before apex; a suffused ochreous-orange patch in middle of disc at  $\frac{3}{5}$ , edged posteriorly and above with fulvous-reddish; an indication of whitish-leaden dotting along and before

termen and tornus. Cilia dark fuscous (imperfect). Hind wing dark brown, costal third whitish except towards apex. Cilia (imperfect) fulvous-orange, basal third fuscous.

Eighth segment thickened, forming a collar around basal part of ovipositor. Limen, a strong broad band narrowed laterally. Ostium, a shallow cup. Ductus bursae moderate, rather narrow. Bursa copulatrix simple (Slide No. 461 D, type).

Araucaria Camp, 800 m, March 9, 1939. One specimen, in somewhat damaged condition, but very distinct.

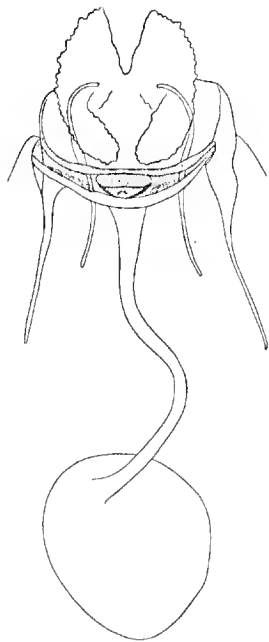


Fig. 259: *Aphthonocosma plutarcha* gen. nov., spec. nov., female, genitalia.

**Nikolaia** gen. nov. (fig. 260)

Head with loosely appressed scales, side tufts large, raised, spreading. Ocellus small, posterior. Proboscis short, weak. Antenna moderately ciliate in male, ciliations 1, finely serrulate in female, scape rather short, without pecten. Palpus moderately long, subascending, in male rather slender, curved, median segment with rough scales beneath, dilated by roughly projecting scales towards apex above, in female median segment rather smooth beneath, considerably dilated with appressed scales towards apex above, somewhat narrowed at apex, terminal segment moderate, subacute. Thorax without crest. Fore wing elongate-ovate, broadest in middle, in male without costal fold, 1b furcate along basal  $\frac{1}{3}$ , 2 from  $\frac{2}{3}$ , 3 from angle, 3—5 separate, equidistant, 5 subparallel, 6 from upper angle of cell, 7 and 8 stalked, stalk from before angle, 7 to termen, 11 from middle. Hind wing trapezoid,  $1\frac{1}{4}$ , cilia  $\frac{1}{4}$ , in male with lower edge of cell throughout, vein 1c and cell between those: with fine, rather sparse hairs closely appressed to upper surface of wing, upper edge of cell in middle



with a fan of very long fine, little appressed, black hairs with bases arranged in an oval; cell short:  $\frac{1}{3}$ , 2 from  $\frac{2}{3}$ , 3 and 4 stalked from angle, 5 closely approximated to stalk at base, 6 and 7 long, connate, diverging, 7 to apex.

Typus generis *Nikolaia melanopsygma* spec. nov., male, female.

Dedicated to our son, Nikolai Diakonoff. Structurally nearest to *Enoditis* MEYRICK. Distinct by narrow hind wing with peculiar fan of long scales, and short cell. Judging by the male genitalia closely correlated with *Lophoprora* MEYRICK, and, less closely, with *Carphomigma* gen. nov.

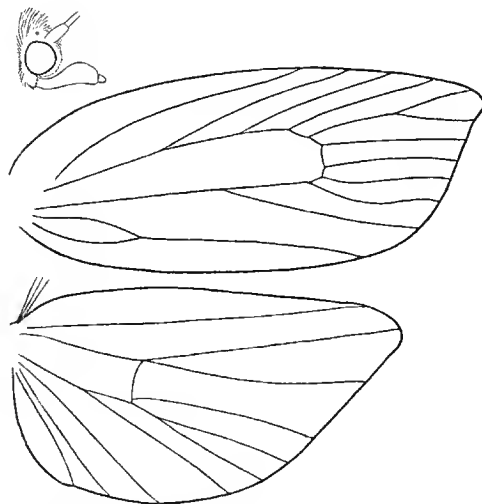


Fig. 260: *Nikolaia melanopsygma* gen. nov., spec. nov., female, wing neuration and head.

***Nikolaia melanopsygma* spec. nov. (figs. 249, 250, 260)**

*μέλας* = black, *ψῆγμα* = a fan

♂ 20 mm, ♀ 20–22.5 mm. Head, palpus and antenna ochreous-brown, flagellum of antenna ringed with dark brown. Thorax dark brown, mixed with pinkish-fulvous, a transverse post-median light ochreous-pink band. Abdomen greyish-brownish, in male anal tuft brownish-ochreous or pale ochreous, in female anal segment dark brown, anal tuft ochreous. Legs fuscous, ringed with golden-ochreous. Fore wing elongate-ovate, costa in male considerably curved throughout, in female strongly arched anteriorly, less curved posteriorly, apex subacute, termen slightly sinuate, moderately oblique, dorsum rather curved. Whitish-ochreous and brownish-ochreous, suffused with fulvous, and dark lilac-grey, marked with dark brown. Basal patch suffused with brownish-lilac-grey, mixed with fulvous and whitish-ochreous; margin of this patch narrow, strongly

angulate in middle, brownish-black, minutely edged with deep fulvous, followed by a moderate lilac-grey angulate band, and on costa preceded and followed by a short brownish-black line; central fascia from  $\frac{2}{5}$  of costa to  $\frac{3}{4}$  of dorsum, broad, dilated below, and occupying posterior half of dorsum: brownish fulvous, slightly strigulated on costa with blackish; anterior edge concave, somewhat undulate, rather distinct, upper fourth with a blackish and fulvous line; posterior edge suffused, very oblique, serrate above, rounded, scarcely perceptible beneath; space between basal patch and central fascia pale ochreous, irrorated with dark grey and slightly with fulvous, much more so towards costa; costal patch regularly elongate-semiovate, from beyond middle of costa to before apex, brownish-fulvous; space between this patch and central fascia light brownish-ochreous, forming a gradually curved semiovate band around costal patch, ending in apex; terminal area below this band suffused with dark lilac-grey, with rounded dark brown dots followed by light ochreous scales, arranged in two rows, tolerably parallel to termen; anterior row more undulate and preceded by a pair of much smaller dark brown dots in middle of disc; a round suffused, steel-black dot on lower angle of cell; dorsum along anterior half with lilac-grey dots, along posterior half with three-four well-defined whitish-ochreous dots; sometimes entire wing except semicircular area around costal patch suffused with dark lilac-grey and brownish, then that area pale yellow or light orange. Cilia fulvous barred with dark grey except in apex. Hind wing pale brownish-golden-ochreous, densely marbled with brownish-grey, in male paler and less marbled, a fan of long sparse hairs on upper edge of cell: black, with pale ochreous base. Cilia brownish-golden-ochreous, with a dark grey ante-median shade.

Tegumen erect. Uncus narrow, top dilated, rounded, with projecting long bristles beneath. Socius very large, edge angularly projecting beyond base. Gnathos slender, long, hook dilated. Transtilla complete (single), moderately broad, densely dentate above except in middle which is narrowed. Valva elongate, broadest in middle, cucullus rather truncate, sacculus narrow, convex; a patch of strong bristles below base of costa. Vinculum moderate. Juxta and anellus rather strong. Aedoeagus moderate, rectangularly bent, top hooked (Slide No. 463 D, holotype).

Ostium a small, shallow cup, a small sclerotisation in its centre may represent colliculum. Limen broad, straight in middle, with small angulation laterally. No cestum. Ductus bursae rather short, broad. Bursa copulatrix erect-ovoid. Signum dagger-shaped, curved posteriorly, capitulum moderate, fastened on an elongate sclerotized patch in wall of bursa (Slide No. 462 D, allotype).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 17–29, 1938 (allotype, female), October 30, 1938 (holotype, male). Sigi Camp, 1500 m, February 24, 1939. Two males, three females. Colouring and markings suggest a *Peronea*.

**Arctephora** gen. nov. (fig. 261)*ἀρκυτή* = bearskin, *φέρω* = to wear

Head with face covered with rather smoothly appressed scales, vertex with long roughish hairs, side tufts of long fine scales, highly raised and forming a large fan at each side, touching each other over vertex. Ocellus small, posterior. Proboscis developed. Antenna in male without notch, with scape elongate, rather stout, densely scaled, flagellum moderately ciliated, ciliations under 1. Palpus moderately long, ascending, rather appressed to face, median segment with dense short, appressed scales, hardly projecting above and beneath, gradually, but little dilated, terminal segment short, thick, obtuse. Thorax with a short, thick bifid crest, tegula very broad, strongly elongate by long apical fringe of scales. Abdomen with thick fine lateral pencils of long hairs at base, posterior half with long hairs laterally. Fore wing without scale-tufts, with a strong and broad costal fold to  $\frac{1}{2}$  which is fringed along edge with very long hair-scales, upper half of cell with long fine hairs on under side of wing, vein 12

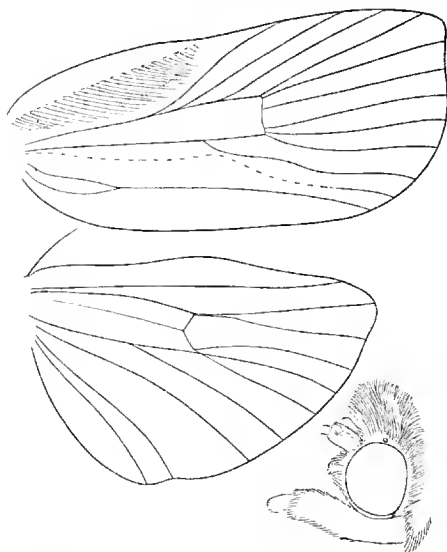


Fig. 261: *Arctephora iubata* gen. nov., spec. nov., male, wing neuration and head.

on under side with a short tuft of scales beyond base, projecting downward; 1b furcate at base, 2 from beyond  $\frac{3}{4}$ , 3 from angle, closely approximated to 4, 5 not approximated, 7 separate, from angle, to termen, 10 closer to 11, 11 from about middle. Hind wing with a streak of dense hairs along cubitus, closely appressed to wing membrane *above* that vein; upper surface with a large brush on base of anal veins, and with fine long hairs on dorsum as far as vein 1a; 2 from beyond middle, 3 and 4 connate from angle, 5 closely approximated, 6 and 7 closely approximated and soldered along basal  $\frac{1}{4}$ .

Typus generis *Arctephora iubata* spec. nov., male.

Nearest to *Ctenopseustis* MEYRICK, 1885, from New Zealand and South

America, differing by ascending palpi, thoracic crest and very long tegulae. Judging by the male genitalia also correlated with *Carphomigma* and *Nikolaia*.

***Arctephora iubata* spec. nov. (figs. 257, 261)**

♂ 31 mm. Head pale ochreous, face with a transverse suffused brown streak above. Palpus whitish-ochreous, median segment with posterior half suffused with brownish, except cilia below. Antenna brown, smoothly scaled with pale ochreous, scape brown above, apex pale ochreous. Thorax ferruginous-brown, posteriorly mixed with whitish-ochreous, a broad subapical transverse whitish-ochreous band dilated laterally, crest dark ferruginous-brown, two pale ochreous submedian longitudinal streaks, patagia pale ochreous, together forming a dark ferruginous-brown median tuft, tegula whitish-ochreous, basal fourth bright tawny; pleurae whitish-ochreous, long-haired. Abdomen dark fuscous-brown, large pencils at the sides of first segment dorsally pale ochreous, anal tuft light ochreous; venter dark brown, banded with light ochreous, sides ochreous. Legs fuscous-brownish, femora and tibiae banded with brown, tarsi brown, ochreous-ringed. Fore wing elongate-subovate, costal fold moderate, to middle, with a very thick long fringe, costa rather curved and prominent along fold, less curved posteriorly, apex rectangular, termen straight and vertical above, rounded beneath. Ochreous-fuscous tinged ferruginous, markings fuscous-ferruginous. Base of costa with a dark tawny-fuscous suffused spot; costal fold bright tawny, towards end suffused with dark fuscous, an oblique transverse whitish-ochreous spot at its  $\frac{3}{4}$ ; cilia pale golden-whitish-ochreous, suffused and mixed with dark fuscous beyond transverse spot; basal patch glossy whitish-ochreous, outer edge well-defined above, forming a continuation of costal transverse spot to centre of wing, angularly bent there, rather suffused, to dorsum beyond  $\frac{1}{5}$ , slightly projecting posteriorly above middle; basal patch with two angulate transverse streaks, tolerably parallel to its edge: first streak from above  $\frac{1}{5}$  of dorsum to above middle of disc at  $\frac{1}{4}$  of wing, deep tawny strongly mixed with black; second streak paler tawny, not mixed with black, halfway between first and edge of basal patch; wing beyond costal patch suffused with fuscous-lilac, becoming darker along dorsum anteriorly; costa from middle to apex with five darker fuscous-lilac subtriangular dots edged with blackish-fuscous, last one larger, apical; narrow transverse dark fuscous-lilac fasciae, sharply edged with blackish-fuscous, originating from last, second and third of preceding dots; first of these fasciae ill-defined, less oblique, beyond basal patch, its anterior edge parallel to edge of the patch, preceded by tawny suffusion; second fascia little curved, to before  $\frac{3}{4}$  of termen, truncate by vein 4; third fascia narrower, to middle of termen, and along this to tornus. Cilia pale ochreous, with narrow greyish-lilac bars; a subapical and a subbasal greyish-lilac line, suffused and partially interrupted. Hind wing pale ochreous, suffused

with greyish-fuscon except in cell, marbled with dark grey; cilia pale ochreous suffused with greyish-fuscous around apex, a greyish-fuscon submedian line.

Tegumen robust, subspheroid. Uncus broad, concave, with a narrow, pointed, long apical hook. Socius large, pending, very densely covered with long bristles (which actually obscure its outline). Gnathos very short, arms narrow, top dilated, subcardiform. Transtilla, a strong, rising, T-shaped plate, with rounded angles and thickened, dentate upper rim. Valva broad, simple. Aedocagus large, subcylindrical, orifice obliquely truncate, ending in a sharp point. Cornutus, one huge hook (Slide No. 804 D, holotype).

Sigi Camp, 1550—1650 m, February 19, 1939 (holotype). Mist Camp, 1800 m, January 12, 1939 (paratype). Two specimens. A conspicuous, robust insect.

### CNEPHASINI

#### Capnoptycha MEYRICK, 1920

*Capnoptycha* MEYRICK, 1920, Exot. Microl., vol. 2, p. 323. FLETCHER, Mem. Agric. Ind., Ent., vol. 11, p. 39, 1929. DIAKONOFF, Zool. Meded. Mus. Leiden, vol. 21, pp. 152—154, figs. 10 D (gen. ♀), E (gen. ♂), G (neur.), H (head), 1939.

#### *Capnoptycha thelea* spec. nov. (fig. 283)

*θέλειος* = willing

♂ 11 mm. Head and thorax pale whitish-ochreous (the latter damaged). Palpus subascending, little dilated, pale ochreous, slightly mixed with fuscous laterally, except towards apex of median and terminal segments. Antenna pale ochreous, flagellum slightly serrate, ringed with dark fuscous. Abdomen greyish-ochreous. Legs pale ochreous, mixed with fuscous (damaged). Fore wing elongate, little dilated, costal fold rather narrow, to beyond middle, costa gently curved anteriorly, straight posteriorly, apex subobtusate, termen slightly sinuate above, obliquely rounded beneath, dorsum rather arched anteriorly. Whitish-ochreous, sparsely transversely strigulated with blackish, and less strigulated with ochreous. Costal edge (narrow) brighter ochreous, costal fold except along lower edge suffused with dark grey, transversely strigulated with blackish; basal patch indicated by slight greyish indefinite suffusion; central fascia indicated by a suffused small vertical streak on middle of dorsum followed by another streak in disc, suffused with yellowish-ochreous; costal patch at  $\frac{3}{5}$ , moderate, obliquely-triangular, ochreous-greyish, with a broad blackish edge except on costa; this patch followed by two small blackish costal dots, posterior dot elongate, in apex; terminal fourth of wing more distinctly transversely strigulated with short blackish marks slightly suffused with ochreous, with posterior third of dorsum and tornus less distinctly strigulated with cloudy greyish. Cilia pale ochreous with a submedian series of blackish dots. Hind wing pale whitish-ochreous,



clouded posteriorly except towards apex, with rather dark grey; cilia pale ochreous, greyish opposite apex and along costa posteriorly.

Tegumen narrow, strongly erect. Uncus narrow, broad, top rounded, with strong bristles below. Socius small, pending. Gnathos slender, hook robust. Transtilla broad, membranous. Valva narrowly elongate, cucullus narrowed, with blunt top, sacculus strong, ending in a curved point,  $\frac{1}{2}$ . Vinculum moderate, a small furca present. Aedoeagus short, clavate basally; cornuti, short stout thorns (Slide No. 481 D).  
Mist Camp, 1800 m, December 28, 1938. One specimen.

### **Rhomboceros MEYRICK, 1910**

*Rhomboceros* MEYRICK, 1910, Proc. Linn. Soc. N.S. Wales, vol. 35, p. 180; Lepid. Cat., fasc. 10, p. 6, 1912. Gener. Ins., fasc. 149, p. 11, 1913. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 195, 1929. DIAKONOFF, Zool. Meded. Mus. Leiden, vol. 21, pp. 194-196, figs 5 A-B, 7 B-C, 1939.

Owing to the study of four more species of this genus the following particulars may be added to its definition.

Head in male sometimes with a large tuft on vertex and another tuft on lower half of face, face excavate, in female head rather roughly scaled. Basal third of antenna in male thickened, with rough projecting scales above (not projecting beneath), in female normal. Palpus in male porrect, moderately long, roughish above and beneath, or rather smooth; with terminal segment short (but not concealed), or rather long ( $\frac{1}{3}$  to over  $\frac{1}{2}$ ); palpus in female subascending, rather long, slender, little dilated, somewhat roughish above and beneath towards apex, terminal segment moderate or short, obtuse. Fore wing with a costal fold in male, covered with an expansible pencil of scales above; or fore wing without fold, with a fan-shaped flattened patch of scales along base of costa below, projecting over wing edge; sometimes a large tuft of scales on base of dorsum above. Hind wing with vein 2 from  $\frac{2}{3}$ , in female sometimes from  $\frac{3}{5}$ ; costa covered with long hairs above, projecting downward over the wing; or costa normal. Thorax with a moderate posterior crest in male, without crest in female.

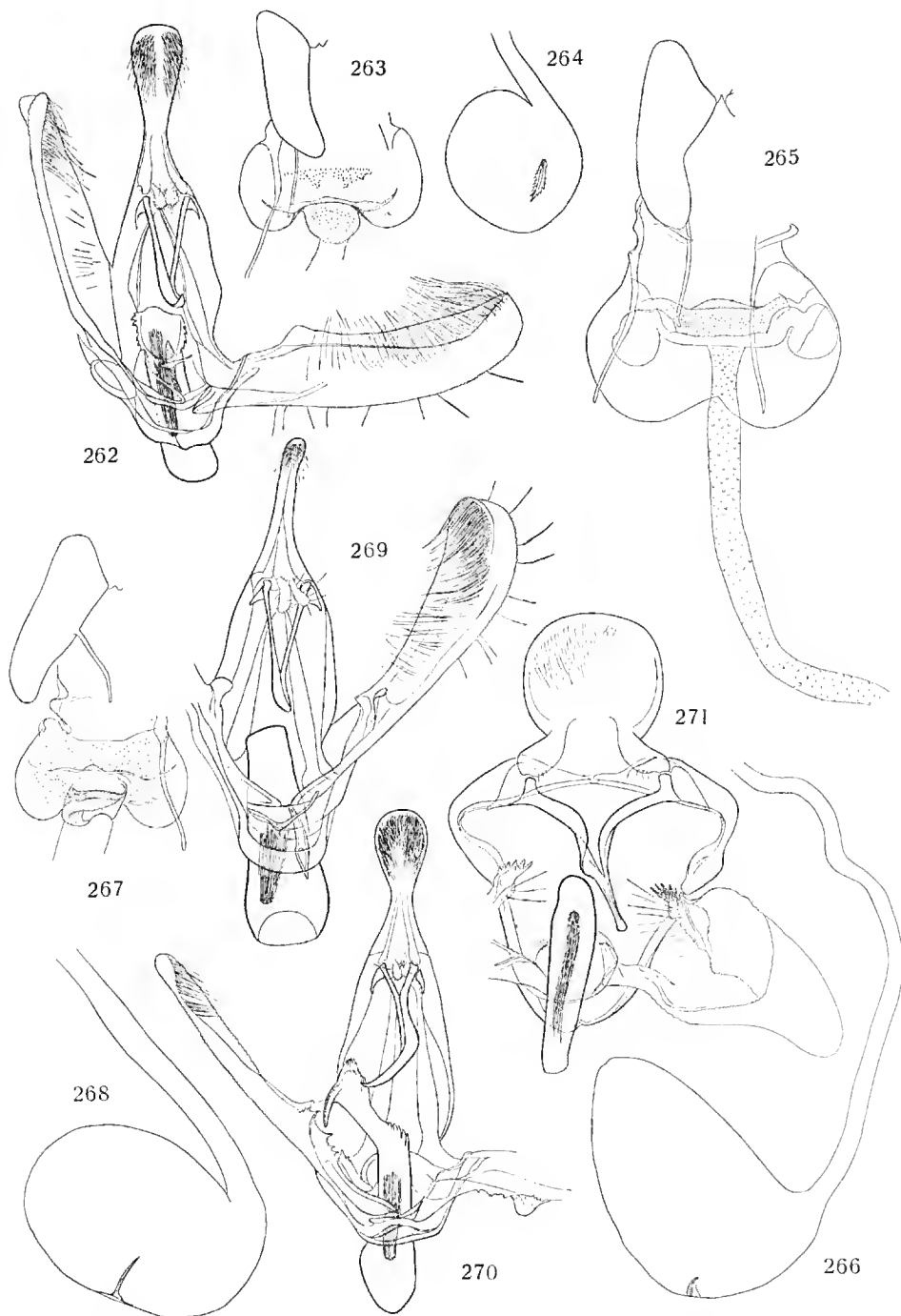
### Key to the known species of *Rhomboceros*

- |  |                                 |
|--|---------------------------------|
| 1. Males . . . . .   | 2                               |
| Females . . . . .  | 5                               |
| 2. Face white . . . . .  | 3                               |
| Face dark fuscous or bronze-brown . . . . .  | 4                               |
| 3. Palpus and pectus ochreous-orange . . . . .                                       | <i> barbata</i> spec. nov.      |
| Palpus and pectus irrorated fuscous . . . . .  | <i> pulverulenta</i> spec. nov. |
| 4. Ground colour lilac-violet, with violet shine. . . . .                            | <i> iridescens</i> spec. nov.   |
| Ground colour pale fuscous, not shining . . . . .                                    | <i> nodicornis</i> MEYRICK      |
| 5. Fore wing with costa moderately curved anteriorly, straight posteriorly . . . . . | <i> pulverulenta</i> spec. nov. |
| Fore wing with costa strongly sinuate . . . . .                                      | 6                               |

6. Costal patch dark brown . . . . . *barbata* spec. nov.  
 Costal patch deep blackish-ferruginous, edged and retinate with whitish . .  
 . . . . . *ethica* spec. nov.

**Rhomboceros barbata** spec. nov. (figs. 270, 274, 275)

♂ 13.5–15.5 mm. Head with a large rough blackish-brown flattened erect tuft on crown, collar greyish-fuscous; face deeply excavate, white, suffused with brown along edges above, with a projecting white tuft below. Palpus ochreous, median segment roughish above and beneath, suffused with brown, less suffused above and at apex. Antenna slightly serrate, greyish, ringed with blackish-brown, basal seventh strongly dilated by a laterally compressed ridge of blackish-brown scales, scape ochreous. Thorax fuscous mixed with dark brown. Abdomen rather dark fuscous, paler anteriorly, anal tuft greyish. Legs deep ochreous, anterior and median tibia with a suffused brown basal, and a similar median ring, all tarsi dark fuscous, ringed with ochreous. Fore wing without costal fold, a fan of rough scales pressed against base from under side, projecting over edge of wing, base of costa with a large raised brush of rough scales; costa little curved anteriorly, straight posteriorly, apex obtusely pointed, somewhat projecting, termen somewhat concave above, gradually rounded over more than lower half, dorsum considerably curved. Ochreous-lilac, strigulated and dotted with ferruginous which colour is edged with ochreous. Basal patch narrow, edge vertical, indent in middle, formed by much raised, rough scales, which give rise to the above mentioned costal brush, and also to a smaller brush on base of dorsum; basal patch and brushes deep ferruginous-brown anteriorly, light ochreous posteriorly; an angulate ferruginous patch between brushes in disc; costal patch moderate, erect, oblique-semiovate or rounded-triangular, occupying slightly less than third fourth of costa, ferruginous, on costa darker, and with a median grey-lilac dot, edged with ochreous on costal margin; median part of wing densely transversely strigulated with deep ferruginous, strigulae more confluent and continuous in disc, edged with ochreous, ground colour more or less suffused with dark lilac-grey; posterior edge of ferruginous colouring rather well-defined, indicating hind margin of central fascia, running from middle of costa to dorsum just before tornus, with an angulation in middle almost touching top of costal patch; dorsum with an even dark lilac-greyish suffusion, dorsal edges dotted with dark ferruginous; terminal fifth of wing lighter, less densely dotted with ferruginous, which colour is broader edged with ochreous; a moderate curved vertical or somewhat oblique blotch, narrow at extremities, from posterior edge of costal patch to tornus, sometimes more vertical and rounded above; a moderate and a small deep ferruginous costal dots before apex, first dot with a short projection below, second dot continued by a narrow ferruginous, ochreous-edged marginal striga in apex, and along termen to its middle. Cilia deep orange-fulvous, along apical half and below apex



Genitalia of Tortricinae. Fig. 262: *Rhomboceros iridescens* spec. nov., male. Fig. 263: *Tremophora coniertus* spec. nov., female, ovipositor and ostium. Fig. 264: *idem*, bursa copulatrix: Fig. 265: *T. alopec* spec. nov., female, upper part. Fig. 266: *idem*, lower part. Fig. 267: *T. guttulosa* spec. nov., female, ovipositor and ostium. Fig. 268: *idem*, bursa copulatrix. Fig. 269: *Rhomboceros pulverulenta* spec. nov., male. Fig. 270: *R. barbata* spec. nov., male. Fig. 271: *Paradichelia ocellata* spec. nov., male.

tinged throughout with ferruginous; a small black patch on dorsum. Hind wing pale ochreous, suffused with brownish-ochreous posteriorly, faintly marbled with greyish; cilia pale ochreous with an antemedian and an apical grey shade.

Tegumen creet, narrowed. Uncus constricted in middle, top ovate-rounded. Socius small, pending. Gnathos rather slender, with a very long hook. Transtilla absent. Valva very narrow, sacculus irregularly strongly dentate, with a blunt projection at the extremity. Aedoeagus bent and bluntly dentate beyond middle, constricted below apex which is bluntly dentate, with a large strong hook. Cornuti, a sheaf of spines (Slide No. 519 D, holotype).

♀ 17 mm. Head light ochreous, vertex mixed with light brown. Palpus moderate, slender, light ochreous, median segment irregularly mixed with light brown, terminal segment light brown anteriorly. Antenna ochreous ringed with brown. Thorax smooth, ochreous, suffused with brown. Abdomen ochreous, suffused with greyish-fuscous, dark fuscous posteriorly, venter dark fuscous. Legs deep ochreous, tarsi fuscous, ochreous-ringed. Fore wing elongate-truncate, costa strongly arched anteriorly, deeply sinuate posteriorly, apex subacute, projecting, termen strongly sinuate, rounded beneath. Pale ochreous and light fulvous, evenly rather densely suffused except towards apex with greyish-lilac, especially in middle of wing, transversely strigulated with ferruginous. A pair of oblique ferruginous lines on  $\frac{1}{3}$  of costa indicating central fascia, undulate and considerably diverging below, to middle of disc; costal patch erect-triangular, with base along costa from before middle to before apex, with top reaching to vein 6, sides slightly convex: rather narrowly edged with dark fuscous, along costa with four short darker streaks, centre greyish-lilac; this costal patch broadly edged posteriorly by pale ochreous;  $\frac{3}{5}$  of wing densely suffused with leaden-lilac, an indistinct suffusion on base and a series of some five ill-defined curved vertical strigulae in middle of disc: ferruginous; posterior fifth of wing light whitish-ochreous, densely mixed and transversely strigulated with fulvous, more so towards tornus; suffused moderate vertical streaks before apex and upper half of termen. Cilia (imperfect) bright fulvous, around apex and upper  $\frac{3}{4}$  of termen ferruginous; a less distinct preapical ferruginous line, except in tornus. Hind wing ochreous-brownish, with bronze gloss, darker posteriorly; cilia whitish-greyish, basal half rather dark fuscous.

Ostium moderate. Linen a broad band, narrowed in middle. Colliculum long, irregularly plicate. Ductus bursae tortuous, sclerotised throughout. Bursa copulatrix ovoid, simple (Slide No. 520 D, allotype).

Mist Camp, 1800 m, January 8, 1939 (allotype, female), January 11, 1939 (paratype), January 15, 1939 (holotype, male). Two males, one female.

***Rhomboceros pulverulenta* spec. nov. (figs. 269, 280)**

♂ 13.5 mm. Head dark fuscous-grey, a large vertical triangular, antero-posteriorly flattened crest on vertex, face slightly concave, white, a short projecting fuscous tuft below. Palpus rather long, slender, median segment tolerably smooth except at apex, terminal segment over  $\frac{1}{3}$ , somewhat obtuse: dark fuscous, upper edge of median segment and tip of terminal segment whitish-ochreous. Antenna short-ciliate, basal part (about  $\frac{1}{8}$ — $\frac{1}{9}$ ) compressed antero-posteriorly, and moderately dilated, pale ochreous-greyish, ringed with blackish. Thorax dark fuscous. Abdomen dark grey, anal tuft paler, ochreous-grey. Legs rather dark-fuscous, tibiae light-ringed. Fore wing without costal fold, elongate-ovate, costa curved anteriorly, almost straight posteriorly, apex subobtuse, termen slightly concave above, gradually rounded beneath, dorsum little rounded. Pale ochreous-whitish, anterior  $\frac{2}{3}$  densely transversely strigulated and marbled with lilac-grey, posterior third marbled with light lilac and ferruginous-brown, markings dark brown. Basal area narrow, dark brown, edge straight, vertical, on dorsum forming a moderate, thick tuft of raised scales, dark brown on base, whitish-ochreous posteriorly; costa at and beyond  $\frac{1}{4}$  with a pair of rather broad suffused lilac-grey transverse short bands, more conspicuous and darker than marbling elsewhere; costal patch large, erect-triangular, from much before middle to before apex, grey-lilac, on costa with three subtriangular patches: first and second larger, first patch grey-lilac, other patches fulvous-brown, edged with dark brown; second patch darkest, connected with a rhomboidal dark brown spot on top of costal patch, which almost touches a dark brown irregular mark below middle of wing on end of cell; two transverse dark brown blotches on costa before apex; three similar slightly oblique blotches originating from lower half of termen, with acute base, lower one longest, to above middle of wing; an irregular ill-defined transverse series of dark brown markings from tornus, running halfway across wing. Cilia light fulvous, barred with pale ochreous, a basal series of fuscous blotches: cilia in apex whitish; cilia along costa rather bright ochreous, and blotched with dark brown opposite costal dots. Hind wing evenly ochreous-fulvous, with bronze shine, faintly dotted with dark grey; cilia light grey, base tinged with fulvous.

Tegumen less narrowed above than in preceding species. Uncus narrow, top little dilated. Socius longer. Gnathos slender, hook much shorter. Valva narrow, dilated posteriorly, sacculus with a moderate terminal projection, with top curved downward. Aedoeagus very large and broad, gradually narrowed posteriorly, cornuti a sheaf of spines and a huge tooth (Slide No. 615 D, holotype).

♀ 12 mm. Head without tuft. Palpus greyish. Thorax ochreous-greyish posteriorly. Abdomen ochreous-grey, anal segment dark fuscous, anal tuft pale ochreous. Fore wing with costa gradually curved anteriorly, sinuate



posteriorly. Greyish-lilae, rather regularly transversely strigulated, and blotched with dark brown which is broadly edged with light ochreous, colouring giving a rather regular marbled and irrorated effect. Basal patch indicated by a narrow dark brown line, straight and oblique above, curved, less oblique, and sinuate below, with a rounded moderate patch in middle, and by a short blackish suffusion of base of dorsum neither reaching base of wing nor fold: central fascia indicated by a small mark at  $\frac{1}{4}$  of costa and a little oblique, strongly clavate irregular transverse band from middle of dorsum to below costa at  $\frac{2}{5}$ ; costal patch as in male, costal dots and a rounded spot on top of costal patch darker, blackish-brown; an irregular interrupted sinuate dark brown striga from below top of patch to tornus; apical and terminal markings about the same as in male, but dark brown. Cilia greyish-fulvous, becoming more mixed with pale ochreous towards tornus, in tornus greyish; a basal row of dark fuscous blotches. Hind wing and cilia somewhat darker than in male; cilia with two pale lines.

Ostium broad. Limen, a broad band interrupted in middle. Colliculum strong, moderately long, fused with ductus bursae which is sclerotised throughout, forms a thick-rimmed longitudinal split along lower two-thirds, and has a rounded projection in bursa. Bursa copulatrix erect-ovoid, without signum (Slide No. 614 D, allotype).

Mist Camp, 1800 m, January 11, 1939 (holotype, male), January 16, 1939 (allotype, female). Two specimens. Allied to preceding. Female insect in this and preceding species reminds much of an *Epagoge*, but differs from that genus by the position of vein 2 in fore wing which originates from  $\frac{2}{3}$  of lower edge of cell.

***Rhomboceros iridescens* spec. nov. (fig. 262)**

♂ 13 mm. Head with a flattened tuft on vertex, face excavate, a flattened tuft below; deep bronze-brown, vertex fuscous mixed with ochreous-greyish. Palpus brown, terminal segment dark brown, extreme tip pale ochreous. Antenna slightly serrate, greyish, ringed with blackish-brown, basal seventh dilated by scaling, blackish below. Thorax dark fuscous (damaged), abdomen dark greyish-fuscous, anal tuft lighter. Legs fuscous, anterior darker. Fore wing without costal fold, edge of basal patch below costa with roughly projecting scales, smooth on edge of costa, roughly projecting again on under surface of wing; costa abruptly strongly curved at base, straight posteriorly, curved before apex, apex subacute, termen hardly concave above, rounded beneath, rather oblique. Basal patch moderate, roughish, ferruginous-brown, mixed with bright ochreous, edge almost straight, oblique, with a ridge of raised blackish-brown scales; costal patch extending along third fourth of costa, conspicuous, semi-circular, deep ferruginous-brown, including a postmedian rounded dark grey dot below costa; top of costal patch not reaching to middle of disc, connected by a somewhat curved irregular moderate deep ferruginous-

brown striga with dorsum before tornus; space between basal and costal patches suffused with deep purple-lilac, becoming deeper lilac posteriorly, with a purple gloss in certain lights; a moderate streak of deep ferruginous suffusion along fold from edge of basal patch to middle; costal edge between dark dots, ochreous; wing beyond costal patch light fuscous-lilac, mixed with ochreous, less glossy, with a few dull ferruginous scales; an erect-ovate vertical ferruginous blotch from  $\frac{3}{4}$  of termen to vein 7, connected above by a line with a deep ferruginous-brown triangular costal dot; a second similar dot on costa before apex; a narrow ferruginous streak along apex and upper half of termen. Hind wing pale ochreous, suffused with cloudy ochreous-fuscous, marbled with darker fuscous, cilia greyish-fuscous with a pale basal line.

Tegumen narrowed. Uncus with a rather broad, gradually dilated top. Socius small. Gnathos slender, hook moderately curved. Valva elongate, rather narrow, not distinctly clavate, sacculus weak, simple. Aedoeagus robust, rather cylindrical, orifice with a wreath of short dentations (top and hook broken?). Cornuti a sheaf of long spines and a large tooth (Slide No. 617 D).

Mist Camp, 1800 m, January 11, 1939. One specimen. Allied to preceding.

**Rhomboceros ethica** spec. nov. (fig. 278)

*ῥιθιζος* = characteristic

♀ 17.5 mm. Head whitish-ochreous, flattened, projecting tuft on vertex with dark brown tip. Palpus dark brown, pale ochreous towards base, median and terminal segments with pale ochreous apex. Antenna pale ochreous, ringed with dark brown. Thorax dark brown, shoulder pale ochreous. Abdomen rather dark fuscous-grey, paler towards base. Legs ochreous, suffused with brownish, anterior leg dark fuscous, with tarsus light-ringed. Fore wing with costa strongly arched anteriorly, sinuate posteriorly, apex obtuse, projecting, termen concave above, gradually rounded below. Deep greyish-ferruginous-brown, glossy, regularly speckled with minute dull transverse dots on basal fourth; with transverse rows of dark brown pale edged small dots; costal edge pale ochreous, dorsal edge whitish; base with a moderate blackish suffusion; an oblique erect-triangular moderate blackish-brown spot on  $\frac{1}{3}$  of costa, preceded by some four small blackish-brown marginal marks; third mark largest, immediately followed by a large erect-triangular whitish costal patch, reaching to before apex; this whitish patch enclosing another, less erect blackish triangular patch, which is finely marbled with whitish-grey, so as to form three separate rather irregular dots along costa; first of these dots connected by an oblique short band with larger rounded patch on top of triangle; both last mentioned marks tawny-brownish, densely scattered with brownish-black; a suffused dark brownish dot on costa before apex; base with a row of dark brown dots. Cilia blackish-grey, along costa

barred with whitish, above apex with an ochreous spot; base of cilia along lower half of termen whitish; in tornus cilia whitish with fulvous apical third. Hind wing brownish-greyish, paler towards base, faintly marbled with dark grey; cilia greyish, base darker grey, barred with pale ochreous, a fine pale basal line.

Ostium broad. Limen very broad, submembranous in middle, forming two upper projections, separated in middle, and two oblique lateral projections, each of which with a small angulation below. Colliculum strong, formed by two unequal pieces. Ductus bursae not connected with colliculum, sclerotized throughout, slightly coiled and dilated below. Bursa spheroid, without signum (Slide No. 616 D).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 15, 1938. One specimen. Allied to *R. nodicornis* MEYRICK.

**Aplastoceros** gen. nov. (fig. 272)

*ἀπλαστος* = simple, *κέρας* = a horn

Head with appressed scales. Ocellus posterior. Proboscis developed. Antenna moderately ciliated in male, ciliations under 1. Palpus moderate, porrect, slender or very slender, median segment elongate, with smoothly appressed scales above, roughish beneath, terminal segment moderate, truncate in male, obtuse in female. Thorax without crest. Fore wing with

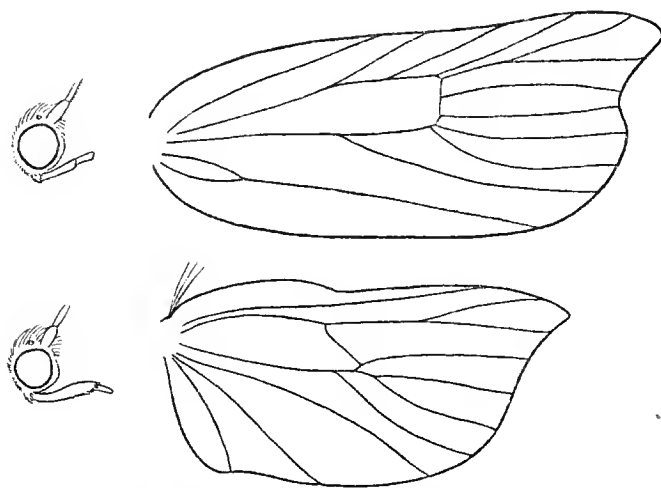


Fig. 272: *Aplastoceros peneplocu* gen. nov., spec. nov., head male (above), head female (below), wing neuration female.

a moderate fold in male, without raised scale-tufts, broad, termen sinuate, 1b furcate, 2 mostly from beyond  $\frac{2}{3}$ , seldom from beyond  $\frac{3}{5}$ , 3 from angle, 3—5 separate, 7 and 8 stalked, 7 to termen, 9 almost connate with stalk, 11 from somewhat before middle, or from middle. Hind wing

without cubital pecten, 2 from beyond  $\frac{3}{4}$ , 3 and 4 short-stalked from angle, 5 closely approximated, 6 and 7 stalked.

Typus generis *Aplastoceros peneploca* spec. nov., male, female.

Closely allied to *Mimeoclysis* DIAKONOFF, 1941, from Java, and to *Rhomboceros* MEYRICK, 1910, which both represent developments of the same type. *Aplastoceros* can be distinguished from the first named genus by the separate veins 3 and 4 in the fore wing, and from the last named by the normal antennae in the male and by the slender palpi. Superficially it resembles *Epagoge* HÜBNER. The genitalia in all the three genera are of the same type.

#### Key to the species of *Aplastoceros*

1. Fore wing with costal patch ill-defined, indicated only by a suffused dark greyish-fuscous edge . . . . . *euetrias* spec. nov.  
Costal patch conspicuous . . . . . 2
2. Costal patch small, not reaching below  $\frac{1}{3}$  of wing breadth, top hardly truncate. . . . . 3  
Costal patch large, reaching below  $\frac{1}{3}$ , mostly to middle of wing, top distinctly truncate. . . . . 4
3. A large dark greyish-fuscous suffusion on dorsum from base to  $\frac{3}{4}$ , reaching above middle of wing . . . . . *carphalea* spec. nov.  
No such suffusion . . . . . *peneploca* spec. nov.
4. A dark brown dense suffusion connecting dorsal markings with  $\frac{2}{5}$  of costa . . . . . *plumbata* spec. nov.  
Dorsal markings distinctly separate from  $\frac{2}{5}$  of costa . . . *dentifera* spec. nov.

#### *Aplastoceros dentifera* spec. nov. (fig. 292)

♀ 15–16.5 mm. Head light ochreous, densely mixed with fulvous-brown, especially on face. Palpus dark brown, apex of median and terminal segments ochreous. Antenna ochreous, ringed with dark brown. Thorax brownish-fulvous, mixed with ochreous, tegula ochreous posteriorly. Abdomen ochreous-grey, anal tuft brighter ochreous. Legs ochreous-fuscous, anterior dark fuscous. Fore wing elongate-ovate, costa gradually curved anteriorly, straight posteriorly, apex subobtuse, termen slightly convex above, rather oblique. Pale whitish-ochreous or pale ochreous (one specimen tinged fulvous throughout), suffused with rather bright tawny-ochreous, markings brown, blackish and dark grey. Tawny-ochreous suffusion along anterior half of wing, with posterior half with scattered ochreous patches in indistinct transverse rows; anterior half of costa dotted with dark brown; central fascia formed by a small oblique-subquadrate patch on costa at  $\frac{2}{5}$ , continued to  $\frac{3}{4}$  of dorsum by a faint cloudy brownish-greyish suffused fascia, which is dilated in middle; a moderate curved-triangular patch on dorsum before  $\frac{1}{4}$ , more or less suffused above, posterior edge mostly well-defined, concave, top connected by a suffused cloudy brownish-greyish fascia with upper fourth of central fascia, marked in disc with more or less numerous dark brown scales,

sometimes suffused with dark brown throughout, and well-defined; costal patch rather large, invert-trapezoid, occupying about third fourth of costa, with anterior angle on end of cell, with truncate top on vein 6; this costal patch dark leaden-grey, edged with black, marbled with blackish-brown, a minute pale ochreous median streak on costa; a rather faint suffused strongly outwardly curved brownish-greyish fascia from posterior angle of patch, running almost vertically to dorsum before tornus, sometimes followed by a second subterminal vertical fascia, running to middle of disc; sometimes tornal markings reduced to greyish-brown retination; two blackish dots on costa (extending over cilia) before apex; terminal margin narrowly edged with dark brown, dorsum often with moderate blackish longitudinal marginal streaks. Cilia bright ochreous, in tornus paler, barred with blackish-brown. Hind wing pale ochreous-brownish, faintly marbled with dark grey; cilia glossy greyish-ochreous with a sub-basal series of faint grey blotches, one small apical blotch on costa before apex.

Ostium flattened. Linen moderately broad, narrowed in middle, collum narrow, cylindrical, narrowed above and below. Ductus bursae narrow, rather long. Bursa copulatrix elongate-ovoid, without signum (Slide No. 486 D, holotype).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 13 (holotype)—November 3, 1939. Seven females. Distinct by dentiform dorsal patch.

*Aplastoceros plumbata* spec. nov. (figs. 252, 253)

♀ 18 mm. (Head missing). Thorax light ochreous, a light brown apical spot, shoulder mixed with light brown. Abdomen ochreous-grey, anal segment dark brown, anal tuft ochreous. Legs dark fuscous, tarsi light-ringed, posterior femur and tibia greyish-ochreous. Fore wing elongate, dilated, costa considerably curved anteriorly, sinuate posteriorly, apex subacute, projecting, termen strongly sinuate above, rounded and projecting beneath, rather strongly oblique. Pale whitish-ochreous, on basal fourth suffused with rather bright ochreous, on terminal fourth suffused with greyish-lilac; markings extended, deep ferruginous-brown, suffused with blackish-brown, transversely strigulated with rather broad glossy dark leaden-grey striae. Base of costa with about five small dark brown dots continued by faint suffused, curved, brownish and ochreous transverse strigulae across wing; central fascia moderately broad, from  $\frac{2}{5}$  of costa to  $\frac{2}{3}$  of dorsum, narrowed above middle, obscured by a large brownish ochreous, and lilac suffusion on lower  $\frac{3}{4}$  of wing, extending over  $\frac{3}{5}$  of dorsum, with anterior edge formed by a dark brown curved fascia, dilated on dorsum; wing transversely strigulated with moderate glossy dark grey striae, beyond central fascia strigulated with dark fuscous and lilac-greyish; this area edged by an outwardly oblique, dark brown transverse



streak in tornus; costal patch subtriangular, with top truncate; this patch suffused with blackish-brown, with two short glossy dark grey blotches below costa preceded and followed by brownish-ochreous scales; costal patch preceded by almost whitish streak of ground colour followed by two small transverse blackish-brown dots on costa before apex; subterminal area suffused with ochreous-lilac, and marked with two transverse, somewhat suffused fulvous lines: from  $\frac{1}{2}$  and  $\frac{3}{4}$  of termen, respectively, both lines above reaching to vein 8; costal and dorsal edges dotted along markings with blackish-brown. Cilia light ochreous-fulvous, in apex deep fulvous, basal half deep fulvous; a fuscous blotch in termen. Hind wing light ochreous-fuscous, densely dotted and marbled with cloudy brownish, darker towards apex. Cilia pale ochreous, with a cloudy apical and a similar antemedian line.

Ostium flattened. Limen moderate, narrowed in middle. Colliculum narrow, cylindrical, upper edge emarginate. Ductus bursae rather wide, with fine spiraled structures. Bursa copulatrix ovoid, simple (Slide No. 487 D).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 18, 1938. One specimen. Closely allied to preceding, differing by shape of wing, and more darkly suffused markings.

***Aplastoceros peneploca* spec. nov. (figs. 272, 273, 282)**

*πέρης* = poor, *πλοκή* = texture

♂ 16 mm, ♀ 17 mm. Head, palpus and thorax pale ochreous, in female slightly tinged brownish, palpus laterally slightly suffused with brownish. Antenna pale ochreous, brownish-ringed. Abdomen pale greyish-ochreous, anal tuft brighter ochreous, venter dark grey. Legs pale ochreous, anterior blackish, median and posterior tarsi and outer spurs infuscated, all tarsi light-ringed. Fore wing elongate-triangular, dilated, base narrow; in male with a rather narrow costal fold to slightly beyond middle, with costa little curved throughout, apex subacute, termen sinuate, vertical; in female costa more curved anteriorly, faintly sinuate posteriorly, apex more projecting. Male pale ochreous, female tinged pale fulvous, markings dark brown. Costal fold slightly suffused with greyish, transversely strigulated with dark brown; basal patch moderate; in female this patch slightly suffused with darker brownish, with edge angulate in middle, vertical; in male basal patch marked with a suffused dark brown dot below costa, lighter brown below, and with a small suffusion along base of dorsum; wing in female irregularly finely marked with deep brown from costa to above middle of disc, with a brownish suffusion below and a subtriangular small suffused deep brown mark on dorsum; central fascia indicated in male by an interrupted suffused somewhat inwardly oblique streak at  $\frac{2}{5}$ , followed by a small suffusion on dorsum; in female this fascia indicated by a small oblique dark brown mark on  $\frac{1}{3}$  of costa; costal patch conspicuous, sharply edged, triangular, somewhat erect in female, rather

small, deep brown, centre slightly lighter; this patch followed on costa by two small semioval deep brown dots, last one just before apex; one-two suboblique ill-defined brownish transverse lines in tornus, in male almost reaching costal patch; apex more suffused with fulvous in female. Cilia in male pale ochreous-whitish, basal half suffused and blotched except in tornus with deep brownish; cilia in female fulvous-ochreous, base brighter fulvous except in tornus. a brownish patch on middle of termen. Hind wing pale ochreous, more tinged ochreous, in female fulvous towards apex; cilia pale ochreous, dark grey around apex.

Tegumen strongly erect, narrow. Uncus narrow, top little dilated, rounded. Socius very small, pending. Gnathos moderate, hook long. Transtilla absent. Valva narrow, cucullus slightly bristled, sacculus with a strong curved thorn at base, followed by a robust triangular sclerotized projection, which is dentate above, and with a pair of long bristles at the outer side. Aedoeagus curved, orifice with a long curved dorsal projection, and a short ventral one (Slide No. 482 D, holotype).

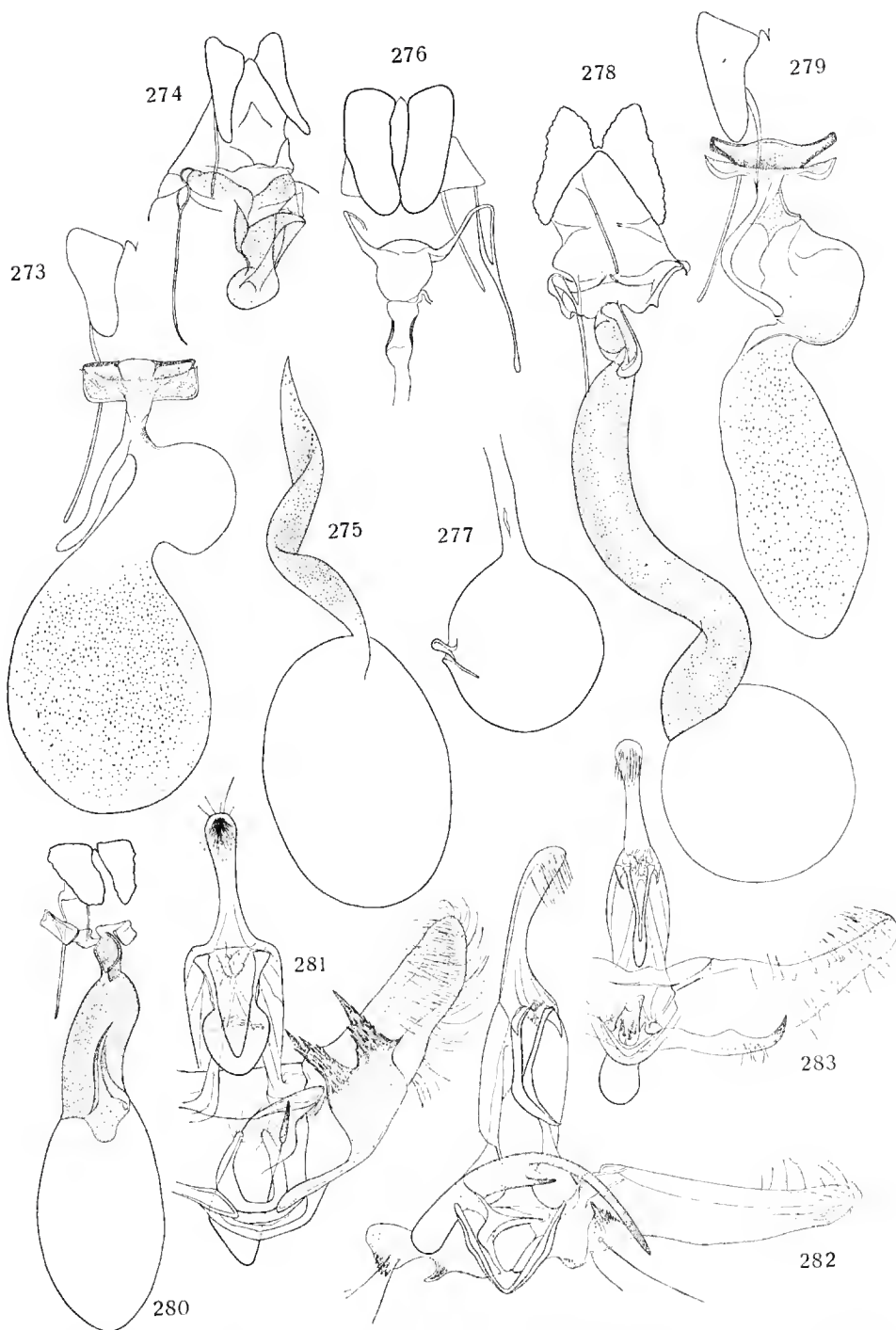
Ostium rather broad, a shallow funnel, dorsal wall strongly sclerotised, upper edge straight. Limen broad, outer layer hyaline. Colliculum short. Ductus bursae narrow above with a vermiform appendix, and with a small sclerotization, suggesting a cestum; ductus bursae broadly vesicular below, somewhat narrowed above bursa. Bursa copulatrix large, ovoid, wall finely scobinate (Slide No. 483 D, allotype).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 30, 1938 (holotype, male), October 19, 1938 (allotype, female). Two specimens.

***Aplastoceros carphalea* spec. nov. (fig. 279)**

*καρχαλέος* = arid

♀ 16.5 mm. Head and thorax pale ochreous, the latter mixed with dark fuscous in middle. Palpus light ochreous, median segment slightly mixed with light fuscous above and beneath. Antenna light ochreous mixed with small darker scales, scape slightly infuscated. Abdomen pale ochreous-grey, anal tuft pale ochreous. Legs pale ochreous, tarsus dark fuscous except articulations of segments (anterior legs missing). Fore wing elongate-triangular, narrow, considerably dilated, costa little curved, oblique at base, slightly angularly prominent at  $\frac{1}{4}$ , gradually concave posteriorly, apex strongly triangularly projecting, rather acute, termen deeply sinuate above, gradually rounded beneath, oblique. Rather pale ochreous, faintly transversely strigulated with light tawny, suffused with dark fuscous, markings dark brown. Base of costal edge with three small dark brown dots; a faint moderate elongate light fuscous suffusion on  $\frac{1}{4}$  of costa; a conspicuous moderate erect-triangular brown patch on  $\frac{3}{5}$  of costa, being blackish-brown on costal edge, and with a light ochreous-greyish dot in middle; top of this patch scarcely reaching below vein 7; patch followed by a small blackish-brown triangular costal dot, and by a



Genitalia of Tortricinae. Fig. 273: *Aplastoceros peneploca* spec. nov., female. Fig. 274: *Rhomboceros barbata* spec. nov., female, ovipositor and ostium. Fig. 275: *idem*, ductus bursae and bursa copulatrix. Fig. 276: *Paradichelia ocellata* spec. nov., female, ovipositor and ostium. Fig. 277: *idem*, bursa copulatrix. Fig. 278: *Rhomboceros ethica* spec. nov., female. Fig. 279: *Aplastoceros carphalea* spec. nov., female. Fig. 280: *Rhomboceros pulverulenta* spec. nov., female. Fig. 281: *Cleptacaca triphera* spec. nov., male. Fig. 282: *Aplastoceros peneploca* spec. nov., male. Fig. 283: *Capnopycha thelea* spec. nov., male.

second faint suffused smaller dot, before apex; a large elongate-ovate greyish fuscous suffusion, transversely strigulated with darker brown, reaching along dorsum from beyond base to  $\frac{4}{5}$ , and extending across wing to slightly above middle; a small rounded group of blackish scales beyond base of disc below costa. Cilia pale ochreous, in apex and along basal half somewhat brighter ochreous, on costa blotched with blackish-brown opposite costal dots; some three moderate suffused brown dots on basal half between terminations of veins 7—5. Hind wing pale ochreous, lighter than fore wing, faintly dotted and marbled with pale fuscous, more distinctly so in tornus; cilia pale ochreous, glossy, with a narrow greyish antemedian line; cilia around apex greyish, except at base.

Ostium, a moderate funnel, dorsal wall strong, with narrow lateral processes. Limen strong, straight, laterally dilated, with lower wall hyaline. Colliculum strong, broad, somewhat constricted in middle, with a long narrow process ventrally. Ductus bursae short, broad, vesicular. Bursa copulatrix elongate, wall finely scobinate (Slide No. 484 D).

Moss Forest Camp, 2800 m, October 11, 1938. One specimen. Superficially resembles *Mimeoclysia pyridina* DIAKONOFF, from Java.

***Aplastoceros euetrias* spec. nov. (fig. 285)**

*εὐήτριος* = finely woven

♀ 17 mm. Head, palpus, antenna and thorax pale creamy-ochreous, antenna faintly ringed with darker, thorax somewhat darker. Abdomen greyish-ochreous, anal tuft pale ochreous. Legs pale ochreous, anterior infuscated, tarsus pale-ringed. Fore wing with costa strongly arched anteriorly, gently sinuate posteriorly, apex subacute, projecting, termen sinuate above, rounded beneath, hardly oblique. Pale ochreous-whitish, suffused with pale tawny-ochreous and blackish, markings blackish. Anterior  $\frac{2}{3}$  of costa with small transverse marks; basal patch indicated by its narrow, convex edge, with a subquadrate suffused moderate brownish-blackish patch on middle posteriorly; central fascia formed by a narrow, oblique almost straight line, suffused with greyish, from  $\frac{1}{3}$  of costa, pointing towards dorsum before tornus; another, tolerably parallel blackish line from middle of costa towards tornus, forming anterior edge of costal patch, dilated posteriorly so as to form a cloudy blackish moderate spot, being the top of costal patch; posterior edge of the latter indicated by a blackish suffused dot below costa, and by two larger subquadrate dark grey spots on costa before apex; a fine oblique line before apex, continued along upper part of termen by some fine blackish dotting; tornal fourth of wing occupied by a blackish suffusion, which is abruptly narrowed before middle of wing and stretches along dorsum to edge of basal patch; this suffusion obscuring dorsal part of ordinary markings entirely, and transversely strigulated with black; this strigulation vertical, becoming coarser and well-defined posteriorly; wing elsewhere scattered with sparse brownish, greyish and blackish scales. Cilia (imperfect) pale



ochreous, mixed with a few blackish scales. Hind wing pale ochreous tinged brownish, faintly marbled with dark grey, cilia pale ochreous.

Ostium wide. Limen very broad, sclerotised, forming an invert-trapezoid transverse band. Ductus bursae short, colliculum and vestum absent. Bursa copulatrix erect-ovoid. Signum, a rounded scobinate patch (Slide No. 485 D).

Iebèlè Camp, 2250 m, December 1, 1938. One specimen.

**Cleptacaca** gen. nov. (fig. 281)

κλέπτω = deceiver, ἀκακος = innocent

Head with appressed scales. Ocellus posterior. Proboscis developed. Antenna moderately ciliated in male, ciliations under 1. Palpus moderate, porrect, slender, median segment with appressed scales, slightly roughish above and beneath at apex, terminal segment moderate, obtuse. Thorax without crest? (damaged). Fore wing without costal fold in male, without raised scale-tufts, 1b furcate, 2 from  $\frac{2}{3}$ , 3 from angle, 3–5 separate, 5 parallel, 7 and 8 stalked, 7 to termen, 9 closely approximated, 11 from middle. Hind wing without cubital pecten, 2 from  $\frac{3}{4}$ , 3 and 4 stalked, from angle, 5 approximated, 6 and 7 stalked.

Typus generis *Cleptacaca tryphera* spec. nov., male.

Closely allied to preceding, superficially differing only by absence of costal fold in fore wing, but with the male genitalia of a quite different type, much like those in *Cnephasia* CURTIS (approaching the "*Nephodesme*" type of PIERCE).

**Cleptacaca tryphera** spec. nov. (fig. 281)

τρυφή = delicate

♂ 15 mm. Head, palpus and thorax pale ochreous tinged with brownish, median segment of palpus slightly infuscated, little dilated. Antenna pale brownish-ochreous, ringed with dark brown. Abdomen pale brownish-ochreous, suffused with dark grey in middle above, and especially below middle. Legs pale ochreous, outer spurs dark brown, tarsi brighter brownish-ochreous, anterior and median tibia and tarsus suffused with dark brown. Fore wing elongate-truncate, rather broad, little dilated, costa strongly curved anteriorly, straight posteriorly, apex rather pointed, slightly projecting, termen distinctly sinuate, little oblique. Pale ochreous, slightly suffused with greyish, partially transversely strigulated with ochreous-brown. Anterior half of costa with ill-defined greyish strigulation and dark brown dotting; basal patch indicated by a narrow, indistinct greyish strigula from costa beyond base, running obliquely to middle of disc before  $\frac{1}{5}$ ; central fascia indicated by a small faint greyish suffusion on  $\frac{1}{3}$  of costa, marked with a short oblique dark brown strigula, and by a scarcely perceptible irregular oblique streak of greyish suffusion from below this strigula to dorsum before tornus; lower half of this streak with



a pair of faint undulate brownish-ochreous strigulae marked with a few dark brown scales; costal patch elongate-triangular, from middle of costa to apex, suffused with grey; edges of patch indicated by fine dark brown dotting; about four small dark brown transverse strigulae on patch along costa; a small quadrate slightly oblique dark brown dot on top of patch; terminal area transversely strigulated with series of short ochreous-brownish, and pale grey vertical streaks, anterior edge of this strigulation rather distinct, concave, from top of costal patch to tornus. Cilia pale ochreous, basal half somewhat brighter, with four small dark brown bars along posterior fourth of costa. Hind wing pale ochreous, whitish towards base, faintly dotted with greyish; cilia pale pinkish-ochreous.

Tegumen erect-rectangular. Uncus narrow, top gradually dilated, bristled below. Socius small, clavate, pending. Gnathos, rather short, hook broad, strong, triangular. Transtilla, a broad membraneous band. Valva elongate, narrowed, cucullus bluntly pointed, with fine bristles, sacculus with a strongly sclerotized median part, bearing two long, acute, scobinate processes above. Aedoeagus rather short, not curved, top obliquely truncate. Cornutus, one thorn. A long furca present; anus bristled apically (Slide No. 491 D).

Sigi Camp, 1500 m, February 27, 1939. One specimen.

**Tremophora** gen. nov. (fig. 284)

*τρήμα* = a hole, *φέρω* = to bear

Head with roughly appressed scales. Ocellus posterior. Proboscis weak, short. Antenna in male ciliated, ciliations under 1, in female short-

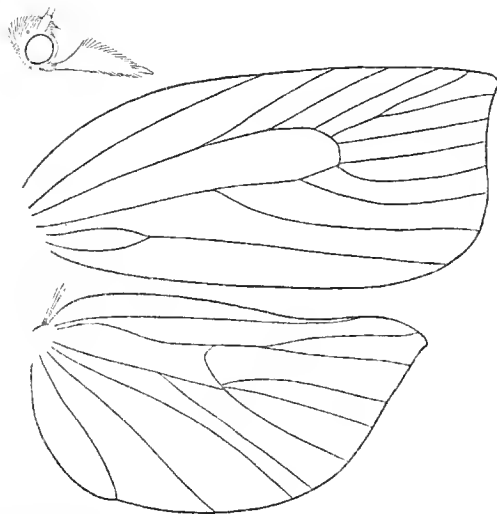


Fig. 284: *Tremophora carycina* gen. nov., spec. nov., female, wing neuration and head.

pubescent. Palpus long, longer in female, strongly triangularly dilated by roughly appressed dense scales, broadest before middle, narrowed posteri-

only, terminal segment moderate, tip rounded, slightly roughish in male. Thorax without crest. Abdomen in both sexes with a pair of dorso-lateral moderate reniform openings on first segment, being terminations of a paired abdominal sense organ. Fore wing with a long, smooth costal fold in male, 2 from  $\frac{3}{5}$ , 3 from angle, widely remote from 4, (seemingly originating from before angle), 4 approximated to 5, 5 and 6 parallel, 7 and 8 rather short-stalked, 7 to termen, 11 from middle. Hind wing without cubital pecten, 2 from  $\frac{3}{5}$ , 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 short-stalked.

Tegumen short, broad. Uncus with a broad base and a narrow bristled hook. Socini small or rather large, appressed to shoulders of uncus, or to arms of gnathos. Gnathos short, curved upward, hook moderate. Transtilla strong. Valva simple, elongate-semioval, rather short, cucullus bristled, saccus short, sometimes with a small apical projection. Anellus bristled. Aedoeagus moderate, little curved; cornuti, a sheaf of spines.

Genital ventrite dilated, sclerotised. Ostium a wide funnel. Limen rather broad, often with rounded lateral lobes below. Colliculum sometimes present. No cestum. Ductus bursae narrow, moderately long. Bursa copulatrix ovoid; signum, a small thorn, without capitulum.

Typus generis *Tremophora carycina* spec. nov., male, female.

Allied to *Taeniarchis* MEYRICK but with veins 7 and 8 in fore wing stalked. Differing from all other known genera of Microlepidoptera by the presence of peculiar abdominal sense organs in the two sexes. The significance of these organs is altogether mystifying. It is to be regretted that by lack of fresh or correctly fixated material the study of the anatomy of these organs did not provide any indications as to their function.

#### Key to the species of *Tremophora*

1. Fore wing with ground colour deep ferruginous-brown, sometimes a minute dark dot on upper angle of cell in female, and a deep blackish-ferruginous spot on end of fold in male . . . . . 2  
Ground colour and markings not thus . . . . . 3
2. Ground colour deeper ferruginous-brown, discal dot in female and dorsal spot in male distinct; larger species (22–23 mm) . . . . . *carycina* spec. nov.  
Ground colour lighter ferruginous-chestnut-brown, discal dot in female absent, dorsal spot in male ill-defined; smaller species (16.5 mm) . . . . . *alopea* spec. nov.
3. Several pale ochreous-whitish, round dots scattered over wing, a vertical pair of dots on dorsum before middle . . . . . *guttulosa* spec. nov.  
Not thus . . . . . 4
4. Ground colour bright ochreous-yellow, coarsely retinate with suffused brownish-ferruginous strigulae . . . . . *scintillans* spec. nov.  
Ground colour yellowish-whitish with fine dense dark ferruginous irroration; or reddish-fulvous, finely retinate with pale ochreous . . . . . *coniortus* spec. nov.

#### *Tremophora scintillans* spec. nov. (fig. 286)

♂ 19–22 mm. Head pale creamy-ochreous, face whitish. Palpus whitish

densely regularly irrorated with dark fuscous. Antenna pale ochreous, ringed with dark brown, scape dark brown. Thorax pale ochreous mixed with bright orange-yellow, sometimes suffused with pale fulvous, especially on tegulae. Abdomen posteriorly densely scaled, glossy, pale ochreous, white at base, anal tuft very large, white. Legs pale ochreous, anterior and median legs infuscated, tarsi light-ringed. Fore wing elongate-triangular, rather dilated, costal fold narrow, to middle, costa gradually curved throughout, apex subacute, termen sinuate, almost vertical. Orange-ochreous or yellow-ochreous, scattered with rounded leaden-grey glossy spots, markings dark fulvous-grey and ferruginous-brown. Costa suffused with dark fulvous-grey except along middle part of lower edge, transversely strigulated with ferruginous; leaden-grey dotting more or less distinctly arranged in oblique, tolerably parallel transverse series; broadest and most distinct series from middle of costa to  $\frac{3}{4}$  of dorsum, dilated at extremities, especially on dorsum and forming an ovate darker suffused spot: this series of dots preceded by less regular dotting, rather continuous along fold, and followed by two more transverse series, which are slightly outwardly curved and more oblique: last of these series from beyond  $\frac{3}{4}$  of costa to middle of termen; sometimes dotting ill-defined, reduced to a semioval moderate brownish dot on  $\frac{3}{4}$  of dorsum, and to a fine transverse subterminal strigulation: a small deep brown point on discoidal vein; terminal edge more or less suffused with darker colour, or with a narrow, deep brown line along upper part. Cilia ferruginous-greyish, darker along base. Hind wing whitish, faintly tinged with greyish-ochreous towards apex, cilia coneolorous.

Tegumen rather elongate. Uneus with a narrow hook which is slightly constricted below its rounded top. Socius large, appressed to gnathos which has a short slender hook. Transtilla with a long dorsal median projection. Valva rather narrow, dilated beyond middle, cucullus densely covered with fine bristles, sacculus simple. Aedoeagus slender, somewhat angulate. Cornuti, a sheaf of long spines (Slide No. 475 D, holotype).

Moss Forest Camp, 2800 m, October 14, 1938 (holotype). Iebèlè Camp, 2250 m, November 30, 1938 (paratype). Two males.

***Tremophora carycina* spec. nov. (figs. 284, 287, 288, 294)**

*zazíczavoz* = brownish-red

♂ 23 mm, ♀ 22–23 mm. Head and thorax bright fulvous. Palpus pale ochreous, densely and evenly irrorated with deep fulvous. Antenna fulvous, more darkly ringed. Abdomen whitish-ochreous, brighter ochreous towards apex. Legs pale ochreous, somewhat infuscated above; tarsi light-ringed. Fore wing elongate-truncate, in male narrowed, moderately dilated, costal fold in male narrowed posteriorly, to middle, costa gradually curved anteriorly, straight posteriorly, apex rather acute, termen concave below apex, gradually rounded beneath, hardly oblique. Dull bright fulvous, densely regularly retinate with glossy deep fulvous-greyish; this

retination sometimes confluent, so as to form a suffusion on dorsum before tornus, reaching halfway across wing; in male costa suffused with dark lilac-grey, except along lower edge; a dark lilac-grey elongate, semioval moderate patch on dorsum before tornus; terminal edge slightly darker fulvous-greyish, glossy. Cilia glossy greyish-fulvous; base of cilia with a moderate deep fulvous-greyish band. Hind wing whitish, faintly tinged with pale ochreous posteriorly; cilia concolorous.

Hook of uncus with rounded top, which is not constricted, like that in *scintillans*. Socius smaller than in that species. Valva longer, posteriorly narrower, and more curved; sacculus with a small marginal hook in middle (Slide No. 476 D, holotype).

Ostium moderate. Limen, a strong transverse band, with transverse, finely rippled structure; extremities of limen rounded; a large, weakly sclerotised plate covering limen from ventral side, with lower edge rounded, and with a transverse fold in middle. Ductus bursae long, with punctulate wall above, narrow, simple beneath. Bursa copulatrix invert. Signum, a large serrate hook (Slide No. 477 D, allotype).

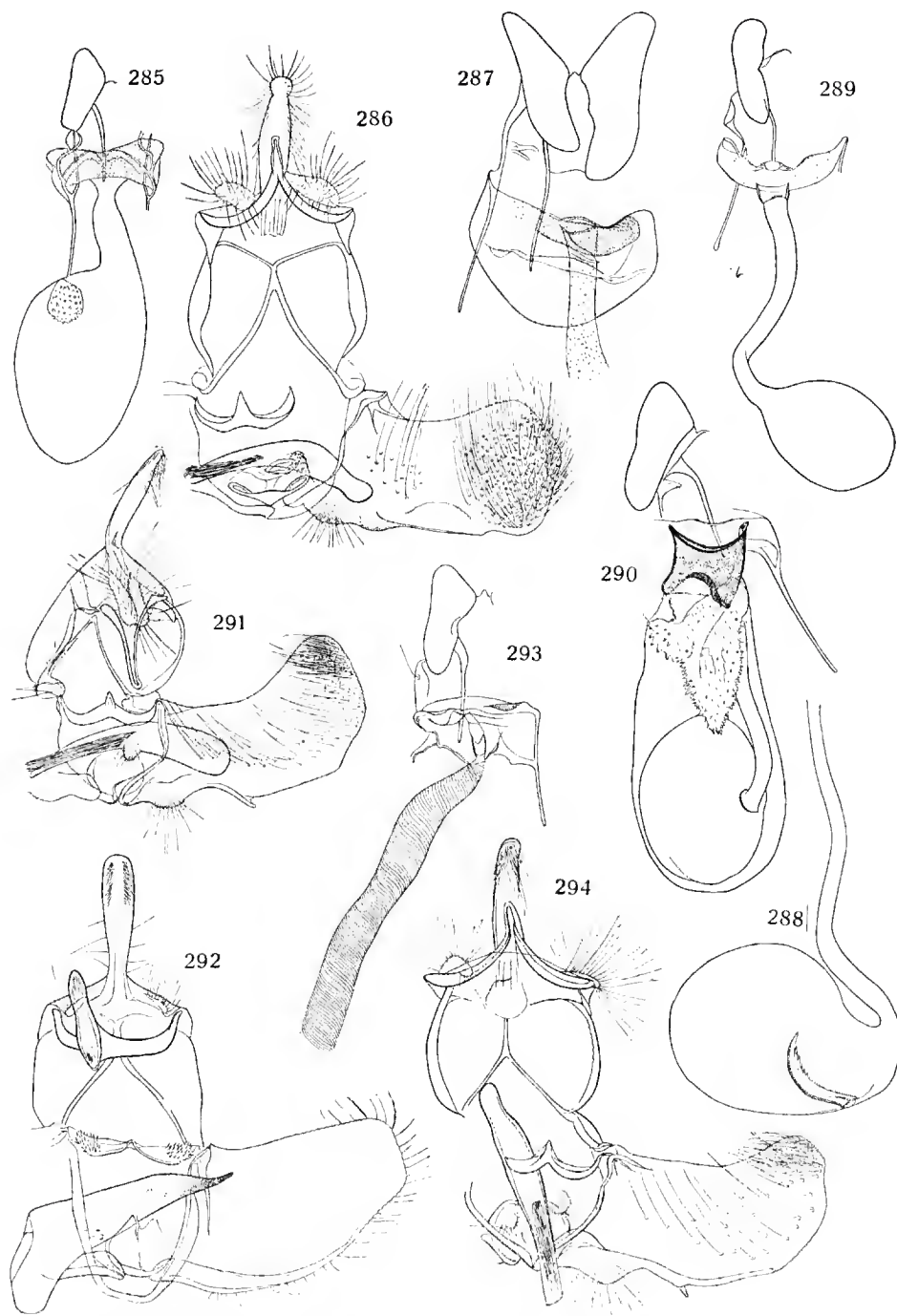
Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 14, 1938 (holotype, male), October 15, 1938 (allotype, female), and October 24, 1938. One male, three females.

***Tremophora alopex* spec. nov. (figs. 265, 266, 291)**

*ἀλώπεξ* = fox

♂ 16.5 mm. Head and thorax light ochreous, suffused with pale fulvous. Palpus pale ochreous, densely regularly irrorated with dark grey. Antenna dark grey, pale-ringed. Abdomen whitish, faintly touched with ochreous, anal tuft white. Legs whitish, anterior and median tibia and tarsus dark fuscous, pale-ringed. Fore wing with a narrow costal fold to beyond middle; elongate-truncate, moderately dilated, costa gradually gently curved throughout, apex subobtusate, termen faintly excavate above, rounded beneath, hardly oblique. Deep tawny-ochreous, dull, scattered with rather indistinct, rounded glossy greyish-fulvous patches throughout, except below costal fold, and along dorsum; these patches forming a moderate sinuate irregular vertical transverse band beyond  $\frac{2}{3}$  from costa to dorsum, beyond this band patches smaller, rather sparse, interneural, forming about three sinuate transverse striae; first stria broadest, connected with transverse band by a branch above middle; a minute dark brown point on middle of discoidal vein; costal fold suffused with dark glossy-grey, except along its lower edge, and transversely finely strigulated with fulvous; dorsal edge of wing finely dotted with fulvous-greyish. Cilia light ferruginous, barred with pale ochreous. Hind wing whitish, touched with pale ochreous towards apex; cilia concolorous.

Tegumen broad, rounded. Hook of uncus gradually narrowed from beyond middle towards top. Socius long, slender, pending. Gnathos slender, pending, narrow, hook indefinite. Transtilla with a small median



Genitalia of Tortricinae. Fig. 285: *Aplastoceros euctrias* spec. nov., female. Fig. 286: *Tremophora scintillans* spec. nov., male. Fig. 287: *T. carycina* spec. nov., female, ovipositor and ostium. Fig. 288: *idem*, bursa copulatrix. Fig. 289: *Dicellitis chrysoneitha* spec. nov., female. Fig. 290: *D. acrographa* spec. nov., female. Fig. 291: *Tremophora alopex* spec. nov., male. Fig. 292: *Aplastoceros dentiferu* spec. nov., female, ovipositor and ductus bursae. Fig. 293: *Mesocalypsis zonata* spec. nov., male. Fig. 294: *Tremophora carycina* spec. nov., male.



dorsal projection. Valva elongate, curved, cucullus dilated, obliquely rounded, with a patch of modified bristles above, sacculus short, with a small apical projection. Aedoeagus rather long, base gradually dilated. Cornuti a sheaf of long spines (Slide No. 473 D, holotype).

♀ 20 mm. Head and antenna light fulvous, thorax bright fulvous (palpi missing). Abdomen pale ochreous, tinged with greyish above. Legs pale ochreous (incomplete). Fore wing elongate-truncate, little dilated, costa considerably curved anteriorly, little curved posteriorly, apex subobtuse, somewhat projecting, termen slightly convex above, rounded beneath. Rather bright fulvous, faintly dotted with greyish throughout, dotting finer posteriorly, forming indistinct transverse strigulae. Cilia deep reddish-fulvous. Hind wing whitish, suffused with pale ochreous posteriorly, tinged throughout with pink; cilia pinkish-white.

Ostium broad, sclerotized. Limen broad and straight in middle, narrowed laterally; below limen a narrow transverse band of weak chitine with a small circular plate at each side; a large semioval plate, indent in middle below, covering preceding from ventral side. Ductus bursae very narrow and long, upper half finely scobinate. Bursa copulatrix invert, elongate-ovoid. Signum, a small serrate tooth (Slide No. 474 D, allotype).

Mist Camp, 1800 m, January 8, 1939 (holotype, male), January 17, 1939 (allotype, female). Sigi Camp, 1500 m, February 22, 1939. Two males, one female. Closely allied to preceding; female can be distinguished by much more curved costa, and by the genitalia.

***Tremophora guttulosa* spec. nov. (figs. 267, 268)**

♀ 18.5 mm. Head, antenna and thorax fulvous. Palpus pale ochreous, very densely and regularly irrorated with fulvous. Abdomen greyish-ochreous, whitish towards base. Legs pale ochreous, anterior tibia and tarsus considerably, median faintly infuscated; tarsi light-ringed. Fore wing elongate-subtruncate, rather narrow, little dilated. Costa gradually considerably curved throughout, except towards apex, apex rather acute, somewhat projecting, termen sinuate, little oblique. Light tawny-fulvous, slightly tinged with greyish, somewhat glossy, regularly dotted with small erect-transverse dull bright fulvous dots, arranged in slightly outwardly curved little oblique rows throughout the wing; rounded and erect-ovate moderate pale yellow dots edged with fulvous spread as follows: a group in  $\frac{1}{5}$  of disc, some three less distinct dots below middle of costa, and three larger dots in an oblique series from middle of termen; a short pale yellow, fulvous-edged and parted moderate vertical mark on middle of dorsum, reaching to fold, crowned by a blackish dot; before this mark a row of some four smaller pale yellow dots along fold; a larger rounded dot on closing vein; a row of small blackish points along posterior half of dorsum, in tornus, and along termen to apex; three or four somewhat curved rows of similar points running transversely before apex, and before upper part of termen. Cilia light ochreous turning fulvous towards

apex and dorsum, with a broad fulvous subbasal line throughout. Hind wing pale ochreous, brighter ochreous posteriorly, glossy; cilia pale whitish-ochreous, glossy.

Ostium broad, with rounded invaginations at the sides below. Limen broad, simple, upper edge slightly sinuate, with a small median projection. Colliculum strong, short, with a sinuate fold ventrally. Ductus bursae narrow, simple. Bursa copulatrix invert-ovoid; signum, a narrow smooth thorn (Slide No. 478 D).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 16, 1938. One specimen. Allied to preceding.

**Tremophora coniertus** spec. nov. (figs. 263, 264)

*κονιοτός* = a cloud of dust

♀ 18–19 mm. Head pale ochreous, mixed with fulvous. Palpus pale ochreous, densely regularly irrorated with fulvous, terminal segment pale. Antenna pale ochreous, ringed with fulvous. Thorax chestnut-brown or pale ochreous, patagium and tegula pale ochreous mixed with fulvous and brown. Abdomen rather bright ochreous, paler towards base or rather light ochreous. Legs pale ochreous, anterior leg darkly infuscated, median leg less infuscated, tarsi light ringed. Fore wing with costa considerably gradually curved anteriorly, almost straight posteriorly, apex subacute, termen sinuate, somewhat more oblique than in preceding species. Pale straw-yellow, densely irrorated with dark grey, more so towards base along costa and in apex; less densely irrorated with pale fulvous, or pale ochreous-fulvous, somewhat darker fulvous towards base; with dense and regular transverse strigulation formed by slightly curved faintly undulate light chestnut-brown strigulae which are narrowly edged with pale ochreous; costa densely dotted with fulvous, costal edge light ochreous; a small transverse dark greyish-brown spot or a small chestnut-brown streak, preceded by a round less conspicuous dot, on closing vein. Cilia pale straw-yellow, brighter in apex and along costa, basal third fulvous around apex, a faint antemedian interrupted fulvous line elsewhere; or pale ochreous, with basal third light chestnut-brown, a minute pale basal line, cilia along dorsum unicolorous pale whitish-fulvous. Hind wing whitish, tinged ochreous-yellowish or pale ochreous posteriorly, in holotype a few dark grey suffused dots in apex; cilia whitish, tinged yellowish-ochreous.

Ostium moderate, a broad, rounded, sclerotized tube, dorsal wall not sclerotized, with a broadly rounded invagination at each side below. Limen narrow, strong, upper edge slightly projecting in middle, extremities narrowed. No colliculum. Ductus bursae long, narrow. Bursa copulatrix small, rounded. Signum an elongate scobinate patch (Slides No. 479 D, holotype; 480 D, paratype).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 30, 1938 (holotype). Iebèl Camp, 2250 m, November 20, 1938.

Two specimens, rather differing in ground colour but conspecific according to the genitalia. Allied to preceding.

**Mesocalyptis** gen. nov. (fig. 295)

Head rough. Ocellus posterior. Proboscis developed. Antenna moderately ciliated in male, ciliations under 1. Palpus moderately long, ascending, rather slender, with roughly appressed scales median segment little dilated, broadest somewhat beyond middle, terminal segment moderate, pointed. Thorax without crest. Fore wing without costal fold, without raised scale-tufts, 1b furcate, 2 from beyond middle, 3 from before angle, 4 from angle, 5 parallel, 7 and 8 stalked, 7 to termen, 10 from  $\frac{3}{4}$ , 11 from middle. Hind wing without cubital pecten, 2 from  $\frac{1}{3}$ — $\frac{1}{2}$ , 3 from slightly before angle, close to 4, 4 from angle, 5 approximated, 6 and 7 short-stalked.

Typus generis *Mesocalyptis morosa* spec. nov., male.

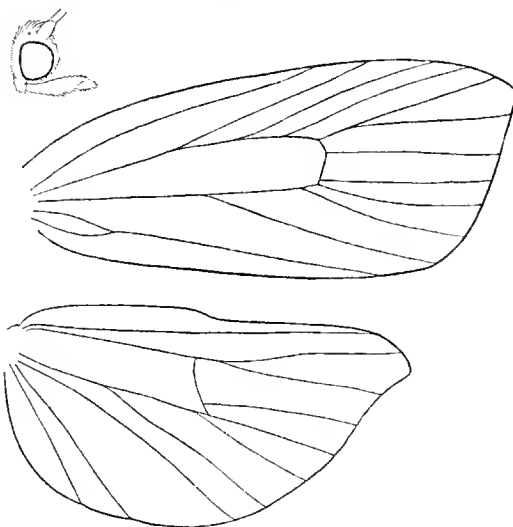


Fig. 295: *Mesocalyptis morosa* gen. nov., spec. nov., male, wing neuration and head.

Closely allied to *Tremophora* gen. nov. but without any trace of abdominal organs. Superficially approaches *Arizelana* gen. nov., but without costal fold and with slender palpi; also approaches *Procalyptis* MEYRICK (both genera in the tribe Cacoeciini) but with longer palpi, without costal fold in fore wing, and with 6 and 7 stalked in hind wing. Forms together with the preceding genus and with *Taeniarchis* MEYRICK a natural group, with the genitalia of a very similar type.

Key to the species of *Mesocalyptis*

1. Head dark ferruginous-brown: fore wing with ground colour rather dark brown, markings not conspicuous . . . . . *morosa* spec. nov.  
 Head pale tawny-fuscous; fore wing with ground colour pale ochreous-fulvous, markings conspicuously darker . . . . . *zonata* spec. nov.

**Mesocalyptis morosa** spec. nov. (figs. 295, 296)

♂ 19 mm. Head dark ferruginous-brown. Palpus light brown mixed with blackish-brown, especially above and beneath, terminal segment blackish-brown. Antenna dark fuscous, ringed with blackish. Thorax dark grey, anterior half dark ferruginous-brown. Abdomen dark greyish-fuscous, anal tuft greyish-ochreous. Legs dark fuscous, tibiae light-ringed, posterior leg pale ochreous-greyish, tibia dark-ringed. Fore wing without costal fold, elongate-ovate, dilated, costa rather curved anteriorly, less curved posteriorly, apex rounded, termen rounded, hardly concave above. Dull tawny and coffee-brown, densely scattered with glossy dark grey scales, rather indistinctly marked with dull dark coffee-brown. Base of wing and dorsum suffused with dark brown; costa with narrow transverse streaks becoming more outwardly oblique posteriorly, reaching  $\frac{1}{3}$  across wing; about six anterior streaks more distinct, posterior streaks ill-defined and obscured by dark brown apical suffusion which forms an ill-defined oblique patch from apex to end of cell; cell narrowly edged with dark brown; an ill-defined moderate dark brown dull fascia from base along and slightly below lower edge of cell, continued by a series of rounded dark brown dots beyond cell; this fascia tolerably parallel to discoidal vein, beyond upper angle of cell connected with the fifth oblique costal line originating from costa beyond middle; an oblique subterminal band of coffee-brown suffusion from apex to vein 3; a row of dull dark subtriangular dots along dorsal edge, and a row of longitudinal elongate dots between veins along termen. Cilia fulvous, barred with fuscous-brown, basal half brown. Hind wing ochreous-grey, faintly coarsely marbled with dark grey; cilia ochreous-greyish, becoming whitish-greyish towards tornus and along dorsum, a grey antemedian shade.

Tegumen short, broad. Uncus with hook clavate, top narrowed. Socius small, appressed to tegumen. Gnathos short, porrect, hook moderate. Transtilla moderate, flattened, slightly angulate in middle, short-dentate laterally. Valva simple, semiovate, truncate. Aedocagus pistol-shaped, strong, with a sharp point (Slide No. 493 D).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 14, 1938. One specimen.

**Mesocalyptis zonata** spec. nov. (fig. 293)

♀ 16 mm. Head and palpus pale tawny-fuscous, terminal segment of palpus darker fuscous. Antenna dark fuscous, scape tinged fulvous, a pale ochreous spot above. Thorax dark greyish-fuscous. Abdomen pale ochreous-greyish, anal tuft brighter ochreous. Legs pale ochreous, anterior tarsus blackish, pale-ringed. Fore wing elongate-ovate, little dilated, without costal fold, costa considerably curved anteriorly, less posteriorly, straight in middle, apex rounded, termen rounded, scarcely concave above, moderately oblique. Pale ochreous-fulvous, markings dark ferruginous-

brown and fulvous-brownish. Basal patch moderate, ferruginous-brown, edge slightly convex, somewhat oblique, a broad ferruginous-brown fascia originating from its middle, running along lower edge of cell, with two angular projections below, which are connected with dorsum by a fulvous suffusion; this fascia is narrowed on lower angle of cell, and connected with top of a large invert-triangular suffused patch from below costa, which is connected above with costal edge by four short projections and reaches from  $\frac{3}{5}$  of wing to before apex; two narrow oblique ferruginous-fulvous transverse lines on  $\frac{2}{5}$  of costa, connected along upper edge of cell by a ferruginous longitudinal streak; a row of rounded fulvous dots along dorsum, in tornus and along lower part of termen: preterminal area suffused with bright ochreous-fulvous. Cilia brownish-fulvous (damaged). Hind wing pale ochreous, very faintly dotted with greyish: cilia whitish.

Genitalia much like those in the preceding species. Hook of uncus more rounded. Hook of gnathos larger. Transtilla more dentate. Valva longer (Slide No. 494 D).

Sigi Camp, 1500 m, February 24, 1939. One specimen, somewhat rubbed off but distinct by typical markings. Allied to preceding.

#### **Taeniarchis MEYRICK, 1931**

*Taeniarchis* MEYRICK, 1931, Exot. Microl., vol. 4, p. 153. DIAKONOFF, Zool. Meded. Mus. Leiden, vol. 21, pp. 218-219, figs. 14 L-K (head, neur.), 11 A-B (gen. ♂, ♀), 1939.

The following species (females) doubtlessly belong to the present genus, but differ slightly from the genotype, *T. periorma* (MEYRICK, 1910) by having veins 3-5 in fore wing only slightly approximated, and by having veins 3-4 in hind wing separate.

#### Key to the Papuan species of *Taeniarchis*

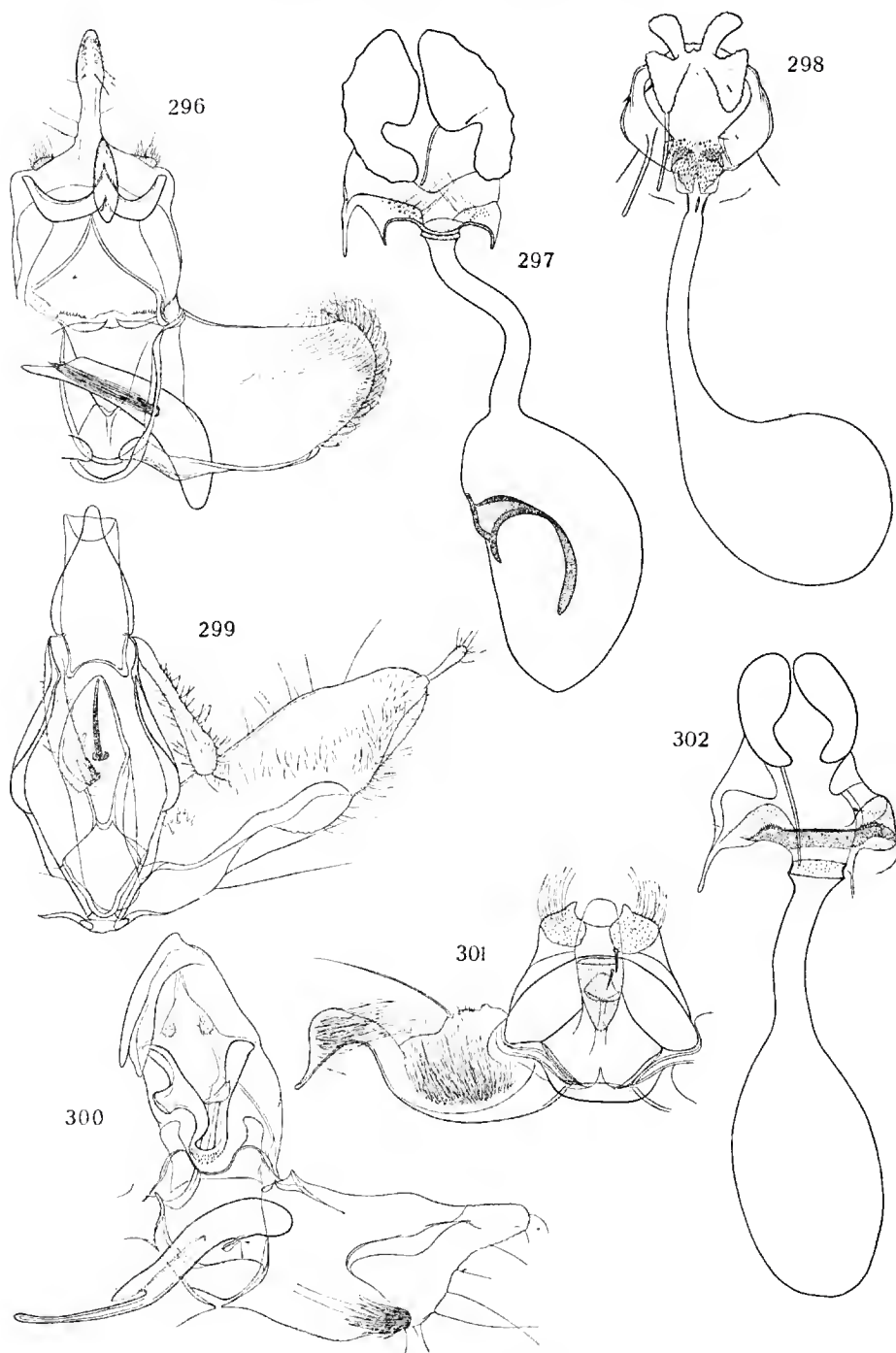
1. Fore wing with an oblique preapical blackish transverse streak . . . . .  
     . . . . . *acrotoma* spec. nov.  
    Fore wing without such preapical streak . . . . . *poliostoma* spec. nov.

#### **Taeniarchis acrotoma spec. nov. (fig. 254)**

*ἄκρον* = marge, *τέμνω* = to cut

♂ 18.5 mm. Head pale ochreous, tinged pale greyish. Antenna greyish-fusces, scape pale ochreous. Palpus light ochreous, median segment with a very oblique subbasal transverse band, a longitudinal patch towards apex above; apical edge and terminal segment throughout fuscous-grey. Thorax pale tawny-greyish, tegula whitish-ochreous, suffused towards apex with light ochreous-brownish. Abdomen dark fuscous-grey, anal tuft and venter light ochreous, sides with long light ochreous hairs. Legs pale yellowish-ochreous. Fore wing elongate-subovate, dilated, costa moderately curved anteriorly, straight in middle, more curved towards apex, apex somewhat curved, rather pointed, termen strongly sinuate, rounded and





Genitalia of Tortricinae. Fig. 296: *Mesocalyptis morosa* spec. nov., male. Fig. 297: *Spatalistis argyrosperma* spec. nov., female. Fig. 298: *Pternozyga melanoterma* spec. nov., female. Fig. 299: *Spatalistis violacea* spec. nov., male. Fig. 300: *Eremas polystalagma* spec. nov., male. Fig. 301: *Spatalistis perusta* spec. nov., male. Fig. 302: *Polyortha ornithopora* spec. nov., female.

prominent below, vertical. Light sandy-ochreous, with a moderate transverse strigulation formed by minute short brown strigulae, markings blackish-brown. Anterior  $\frac{2}{5}$  of costa with a row of minute oblique blackish-brown transverse marks; a pair of longer similar marks at  $\frac{2}{5}$ , interconnected by a small patch of tawny suffusion; some short blackish almost longitudinal marks alternating with minute transverse strigulae from beyond this patch to  $\frac{3}{4}$ ; a transverse moderate fuscous-black streak from  $\frac{3}{4}$  of costa to middle of termen, with edges suffused, slightly narrowed in middle, almost interrupted below costa; followed by three narrow coppery-brown transverse lines, equidistant above, narrowed and considerably converging below towards the extremity of vein 6, last line thicker, just before apex; the lines preceded by and alternating with three rather faint transverse pale leaden-violet shining streaks; lower half of termen edged with a coppery-brown line, preceded by a narrow vertical pale leaden-violet shining line; a narrow suffused dark brown inwardly oblique line from  $\frac{1}{3}$  of fold to  $\frac{3}{4}$  of dorsum, dilated to a moderate suffused spot on dorsal edge; a moderate subquadrate slightly inwardly oblique spot of dark brown irroration on  $\frac{2}{3}$  of dorsum, suffused on dorsal edge with coppery-reddish-brown; a marginal row of minute dots of the last mentioned colour from that spot to tornus; a small dot in tornus and a moderate vertical streak on termen above tornus to vein 5, brownish-black; terminal fourth of wing more distinctly transversely strigulated with brownish. Cilia glossy pale ochreous ? (strongly damaged). Hind wing pale ochreous-brownish, marbled with dark fuscous-grey; a minute marginal group of shining whitish scales towards tornus. Cilia (damaged) pale ochreous, basal third dark fuscous, towards termen mixed with shining whitish scales.

Ovipositor with lobes regularly semiovate, strongly flattened. Ostium wide. Limen strong: an erect-trapezoid plate at each side, divided by a broad split, lower extremity sclerotized, rounded, the plates united medianly by a broad fold curved downward. Ductus bursae narrow, moderately long, simple. Bursa copulatrix weak, without signum (Slide No. 284 D, type).

Araucaria Camp, 800 m, March 11, 1939. One specimen.

**Taeniarchis poliostruma** spec. nov. (fig. 303)

*πολύς* = grey, *στόμα* = mouth

♂ 18 mm. Head and thorax ochreous-grey. Palpus light ochreous, median segment mixed with grey, fringe of projecting scales towards apex above grey, terminal segment ochreous, tip whitish. Antenna pale ochreous, greyish towards apex, scape suffused with grey. Abdomen dark grey, towards base brownish-ochreous, venter dark grey, valva brownish-ochreous. Legs light ochreous, anterior suffused and ringed with grey. Fore wing triangular, strongly dilated, costa little curved anteriorly, strongly curved posteriorly, apex pointed, rather falcate, termen strongly concave above, slightly projecting and gradually rounded beneath, little

oblique. Light chestnut-brown tinged ochreous, costa anteriorly and apical fourth of wing suffused with deep chestnut-brown becoming reddish towards apex; transversely strigulated with interrupted narrow lines anteriorly being light chestnut-brown, posteriorly becoming darker brown, towards costa becoming reddish and suffused with dark grey between transverse strigulae; an indication of a narrow transverse inwardly oblique reddish-fulvous line along end of cell, reaching almost to dorsum; strigulation on posterior dorsal fourth of wing dark ferruginous-brown; a row of rounded reddish-brown dots along dorsum posteriorly; an ill-defined spot of dark brown irroration before upper half of termen; a series of short indistinct interneural subterminal dark brown streaks. Cilia dark greyish-brown mixed with fulvous (much damaged). Hind wing light orange-ochreous, densely suffused and finely marbled with dark grey; cilia dark brownish-grey with pale middle and base, an ochreous patch on termen before tornus.

Ovipositor lobes broad, top narrowed. Limen, two large median ovate plates touching each other. Ductus bursae long, narrow, simple. Bursa copulatrix small, weak, simple (collum of spermatophore long, coiled in bursa) (Slide No. 459 D, type).

Moss Forest Camp, 2600—2800 m, October 13, 1938. One specimen. Allied to preceding.



Fig. 303: *Taeniarchis poliostruma* spec. nov., female genitalia.

### **Dicellitis MEYRICK, 1908**

*Dicellitis* MEYRICK, 1908, Journ. Bomb. Nat. Hist. Soc., vol. 18, p. 616. Lepid. Catal., fasc. 10, p. 53, 1912. Gener. Ins., fasc. 149, p. 52, 1913. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 67, 1929. DIAKONOFF, Zool. Meded. Mus. Leiden, vol. 21, pp. 213—214, figs. 11 S (head), R (neur.), 16 B (gen. ♂), 16 C (gen. ♀), 1939.

### Key to the Papuan species of *Dicellitis*

- |   |   |
|---|---|
| 1. Fore wing with a complete median transverse fascia . . . . . | 2 |
| Fore wing without a complete transverse fascia . . . . .        | 3 |

2. Fore wing with a sinuate, trumpet-shaped fascia at  $\frac{3}{4}$ , a transverse bar in tornus, and a transverse preapical strigula . . . . . *cornucopiae* DIAKONOFF  
Fore wing without a fascia at  $\frac{3}{4}$ , with a preapical furcate mark only . . .  
. . . . . *furcigera* MEYRICK
3. Costa with a dark triangular spot at  $\frac{2}{3}$  preceded by some two, followed by one dots . . . . . *acrographa* spec. nov.  
Costa with a dark basal, a similar median and a subapical spots . . . . .  
. . . . . *chrysonetha* spec. nov.

***Dicellitis acrographa* spec. nov. (fig. 290)**

*ἄκρον* = margin, *γράφω* = to draw

♀ 14 mm. Head light ochreous, vertex pale ochreous, collar brownish anteriorly, pale ochreous posteriorly. Palpus pale ochreous, median segment with a median fuscous patch laterally, terminal segment fuscous below except apex. Thorax brownish (damaged). Abdomen brownish-ochreous, rather dark greyish-brown above, anal tuft pale ochreous. Legs light ochreous, infuscated above, tibia and tarsus ringed with dark fuscous. Fore wing broad, little dilated, costa curved anteriorly, sinuate posteriorly, apex subacute, curved, projecting, termen sinuate. Pale ochreous, transversely strigulated with chestnut-brown and with fulvous short strigulae. Base of wing moderately suffused with fuscous; base of costa suffused with fuscous and transversely marked with dark brown; central fascia indicated by a small obliquely triangular patch at  $\frac{2}{5}$ , ochreous-fuscous edged with dark brown, and by a faint lilac suffusion along posterior half of dorsum, reaching to costal patch, ill-defined above, along dorsum transversely strigulated with undulate dark brown and ferruginous lines; costal patch moderate, triangular, at  $\frac{2}{3}$ , dark brown, centre lilac-grey; this patch continued by a tawny-ochreous suffused transverse streak to middle of disc, and slightly suffused with tawny-ochreous along posterior edge; patch followed on costa by a small subtriangular dark brown dot; posterior third of wing more suffused with bright tawny-ochreous, mixed with lilac, transversely strigulated by vertical series of short chestnut-brown and dark brown streaks. Cilia pale tawny-ochreous, mixed with a few dark brown scales opposite middle of termen (imperfect). Hind wing light fulvous, faintly dotted with brown; cilia pale fulvous, a darker fulvous antemedian line.

Ostium and limen membraneous. Colliculum very strong, broad, cylindrical, lower edge excavate ventrally, prolonged into an irregularly plicate dentate plate, which is perhaps signum. Ductus bursae absent, bursa copulatrix elongate, beginning immediately below colliculum (Slide No. 496 D).

Araucaria Camp, 800 m, March 17, 1939. One specimen. Judging by the shape of wing allied to *D. cornucopiae* DIAKONOFF.

***Dicellitis chrysonetha* spec. nov. (fig. 289)**

*χρυσός* = gold, *ρίθω* = to spin

♀ 9.5 mm. Head rather roughly scaled, ochreous-grey, vertex dark

brownish-grey. Palpus whitish, upper apical half blackish, edge of this colour running diagonally, terminal segment blackish. Antenna slightly serrate, scape ochreous-greyish, flagellum dark brown, apical  $\frac{2}{5}$  greyish-ochreous. Thorax dark fuscous (damaged). Abdomen ochreous-grey. Legs pale ochreous, anterior infuscated, tarsus light-ringed. Fore wing ovate, costa moderately curved anteriorly, less curved posteriorly, stronger curved before apex, apex subacute, termen straight above, rounded beneath, considerably oblique. Pale whitish-ochreous, coarsely retinate with light golden-ochreous, this retination more distinct along costa and on terminal fourth of wing, in disc reduced to two rather isolated irregular, connected spots, posterior spot smaller, on transverse vein; costa with three moderate dark greyish-brown spots: first on base of costa, ovate, second slightly before middle, larger, elongate, somewhat suffused below, third spot smaller, rounded, on costa before apex reaching to vein 7; some dark brown scales in middle of disc, a small dark brown suffusion on  $\frac{3}{4}$  of dorsum; some three indistinct brownish-greyish transverse sub-terminal vertical lines, and scattered scales of the same colour before termen and in apex. Cilia golden-ochreous, posterior half somewhat paler. Hind wing rather dark grey; cilia somewhat lighter with a dark grey antemedian line.

Ostium wide. Limen, a broad band with a small projection in middle of upper edge showing a round opening. Collieulum small. Ductus bursae moderately long, narrow. Bursa copulatrix ovoid, simple (Slide No. 495 D).

Rattan Camp, 1200 m, March 1, 1939. One specimen.

### *Pternozyga* MEYRICK, 1908

*Pternozyga* MEYRICK, 1908, Journ. Bomb. Nat. Hist. Soc., vol. 18, p. 621. Gener. Ins., fasc. 149, p. 53, 1913. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 91, 1929. DIAKONOFF, Zool. Meded. Mus. Leiden, vol. 21, p. 211-212, figs. 11 0 (head), 11 N (neur.), 15 G (gen. ♀), 1939.

#### *Pternozyga melanoterma* spec. nov. (fig. 298)

*μέλας* = dark, *τέρμα* = outer edge

♀ 15 mm. Head light brownish-ochreous. Palpus light brown, terminal segment suffused with dark brown. Thorax light brownish-ochreous, paler posteriorly (damaged). Abdomen dark bronze-grey. Fore wing triangular, dilated, costa arched throughout, apex rounded, termen slightly concave above, scarcely convex above middle, straight below, rather oblique. Rather bright ochreous-brown, suffused along costal half, especially towards apex with dark coffee-brown except on costa before apex; a silvery-whitish narrow slightly sinuate streak from beyond  $\frac{2}{3}$  of costa to upper third of termen, broader on costal half, suffused with brownish in middle and towards termen; two small whitish transverse marks on costa: just beyond that streak and halfway towards apex; a dark coffee-brown suffusion in apex and along upper half of termen, reaching halfway towards



cell; a subterminal row of small, round bluish-metallic spots in apex and along termen; indistinct whitish bars on basal half of costa. Cilia whitish, with bright fuscous antemedian line; broad dark brown bars: before and below apex, and on upper  $\frac{2}{5}$  of termen; tornal cilia coffee-brown with base bright yellowish-fuscous; dorsal cilia and a small dorsal scale projection bright yellowish-fuscous. Hind wing dark greyish-fuscous, with bronze gloss, towards edge suffused with blackish. Cilia dark fuscous-grey with a pale ochreous basal line.

Genital segment forming a thickened ring around ovipositor. Limen represented by two scobinate knobs medianly. Colliculum small. Ductus bursae narrow, gradually dilated below, bursa large, pear-shaped. Ovipositor of a shape typical for this genus: each half separated in a narrow dorsal and a triangular ventral lobe (Slide No. 618 D).

Iebèlè Camp, 2250 m, November, December 1938. One female. Closely allied to the two other species known: *P. haeretica* MEYRICK, from India, and *P. anisoptera* DIAKONOFF, from Java. Male genital characters of this genus are still unknown.

#### ***Berylllophantis* MEYRICK, 1938**

*Berylllophantis* MEYRICK, 1938, Trans. Ent. Soc. Lond., vol. 87, p. 509. DIAKONOFF, Zool. Meded. Mus. Leiden, vol. 21, pp. 198-199 (redeser.), figs. 13 T (neur.), 15 G (gen. ♀), 1939.

Now a second female specimen of the unique species of this genus becomes known, slight corrections and amendments of its description can be made. The genus may be redescribed for the second time as follows.

Head roughly scaled above, face with appressed scales. Antenna minutely pubescent. Ocellus small, posterior. Palpus subascending, rather slender, little dilated with scales, median segment roughish towards apex beneath, terminal segment slender, moderately long, rather pointed. Thorax without crest. Proboscis short. Fore wing elongate-ovate, pointed, termen sinuate, oblique. 1b short-furcate, 2 from  $\frac{1}{3}$ — $\frac{2}{5}$  of lower edge of cell, 3 and 4 from angle, 5 remote, slightly curved upwards towards base, 7 and 8 separate or short-stalked, 7 to termen, 10 from  $\frac{2}{3}$ , 11 from  $\frac{1}{3}$  of upper edge of cell. Hind wing with 2 from  $\frac{3}{5}$ , 3 and 4 short-stalked from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

#### ***Berylllophantis cochlias* MEYRICK, 1938**

*Berylllophantis cochlias* MEYRICK, 1938, Trans. Ent. Soc. Lond., vol. 87, p. 509. DIAKONOFF, Zool. Mus. Leiden, vol. 21, pp. 198-199, figs. 13 T (neur.), 15 G (gen. ♀), 1939.

Distribution: British New Guinea: Papua, Mount Tafa, 8500 feet. Top Camp, 2100 m, January 25, 1939. One female.

#### ***Pandurista* MEYRICK, 1918**

*Pandurista* MEYRICK, 1918, Exot. Microl., vol. 2, p. 166. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 160, 1929. DIAKONOFF, Zool. Meded. Mus. Leiden, vol. 21, pp. 199-200, figs. 14 H (head), 14 G (neur.), 14 F (gen. ♀).

Key to the species of *Pandurista*

1. Fore wing with two reddish-brown oblique transverse strigae on anterior half  
 . . . . . *stictocrossa* MEYRICK  
 Fore wing without such strigae . . . . . *encarsiotoma*, spec. nov.

***Pandurista encarsiotoma* spec. nov. (fig. 256)**

*ἐγκάρσιος* = oblique, *τέμνω* = to cut

♂ 15 mm. Head pale tawny-ochreous. Antenna greyish. Palpus small, brownish-ochreous. Thorax tawny-fuscous. Abdomen greyish-fuscous, anal tuft and venter pale ochreous. Legs pale tawny-ochreous, tarsi suffused with blackish-fuscous, pale-ringed. Fore wing with a strong, but moderately broad, gradually narrowed fold to beyond  $\frac{3}{4}$ , costa little curved, gently sinuate, apex subobtuse, projecting, termen strongly sinuate, considerably prominent beneath, appearing slightly outwardly oblique. Whitish-ochreous, moderately suffused with dark fuscous and grey. Basal patch and costal fold pale ochreous-greyish, tinged lilac, costa moderately suffused with tawny, faintly transversely strigulated with lilac-brownish; a very oblique suffused central fascia from a rather large elongate-triangular spot on  $\frac{1}{4}$  of dorsum to  $\frac{4}{5}$  of costa, interrupted in middle; this fascia greyish-lilac, transversely marked below and suffused above middle with dark fuscous irroration, on and below costa suffused and transversely strigulated with fuscous-blackish; this fascia considerably narrowed below fold, with edges suffused except on dorsum anteriorly; two narrow vertical dark fuscous strigulae in middle of basal patch above fold; a triangular blackish spot on costa beyond basal patch; ground colour beyond fascia pale tawny-ochreous tinged greyish, becoming whitish posteriorly, glossy, almost white along termen and in apex; a broad leaden-grey transverse suffusion from posterior fifth of costa, not reaching apex, dilated below and occupying posterior fourth of dorsum and tornus, edges indefinite; several short dark brown strigulae edged with tawny on this suffusion below costa, and beyond suffusion before apex; two more or less continuous, somewhat curved vertical strigulae, dark brown, edged with pale tawny, from before  $\frac{3}{4}$  of dorsum, from dorsum just before tornus and from above tornus, respectively, middle strigula to above middle of disc. Cilia rather pale ochreous-tawny, whitish in tornus, basal third in apex and along upper  $\frac{2}{3}$  of termen with a row of well-defined blackish-fuscous dots, costal cilia with two blackish bars before apex. Hind wing pale tawny-ochreous, anterior half suffused with greyish, cilia concolorous.

Tegumen erect, moderate. Uncus long, rather slender, apical third hooked, a few bristles below. Socius very small, pending. Gnathos moderate, arms rather slender, hook short, obtuse. Transtilla a strong transverse rod. Valva moderately broad, cucullus elongate, narrowed, bristled, sacculus under  $\frac{1}{2}$ , sclerotized, a strong rising hook in middle with finely scobinate top. Anellus strong with small furca. Aedoeagus short, subcylindrical,

moderately broad. Cornuti, a thick sheaf of short blade-like spines. Vinculum rounded (Slide No. 825 D, type).

Rattan Camp, 1200 m, February 12, 1939. One specimen.

## PERONEINI

### *Spatalistis* MEYRICK, 1907

*Spatalistis* MEYRICK, 1907, Journ. Bomb. Nat. Hist. Soc., vol. 17, p. 978, Proc. Linn. Soc. N.S. Wales, vol. 35, p. 286, 1910. Gener. Ins., fasc. 149, p. 5, 1913. Rev. Handb. Brit. Lep., p. 518, 1927. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 206, 1929. DIAKONOFF, Zool. Meded. Mus. Leiden, vol. 21, pp. 225-226, figs. 11 Q (head), 11 P (neur.), 16 E, F (gen. ♂, ♀), 1939.

### Key to the Papuan species

1. Ground colour clear pale yellow or light yellow . . . . . 2  
Ground colour pale ochreous or ochreous-yellowish . . . . . 4
2. Finely retinate with lilac . . . . . *violacea* spec. nov.  
Markings not lilac . . . . . 3
3. Large oval reddish-brown patch on dorsum centred with yellow . . . . .  
. . . . . *perusta* spec. nov.  
Markings not only on dorsum . . . . . *nummifera* MEYRICK
4. Wing densely suffused with fuscous except on a wedge-shaped costal spot and on extreme apex . . . . . *argyrosperma* spec. nov.  
Wing not thus suffused, basal patch, two transverse fasciae and a terminal fascia distinct . . . . . *conchodes* MEYRICK

### *Spatalistis perusta* spec. nov. (fig. 301)

♂ 15 mm. Head and thorax bright yellow, the latter with a blackish-brown reddish-edged apical spot. Palpus bright yellow, median segment suffused with reddish laterally. Antenna pale ochreous-yellowish, minutely banded with reddish. Abdomen pale ochreous, whitish towards base, suffused with greyish in middle above. Legs ochreous, anterior femur suffused with fulvous above, anterior tibia with two blackish rings, tarsus dark fuscous, pale ringed. Fore wing without costal fold, elongate-ovate, dilated, costa little curved throughout, apex pointed, termen slightly sinuate, oblique. Bright yellow, a deep ferruginous-reddish elongate-ovate spot edged with reddish suffusion dilated posteriorly; this spot reaching along dorsum from before base to tornus, and across wing to below costa, with anterior edge inwardly oblique, upper edge tolerably parallel to costa, posterior edge more oblique than termen; this spot bearing in centre a moderate ovate spot of ground colour suffused with reddish; two rounded suffused black spots: first connecting central spot with tornus and second spot beyond central spot; yellow above mentioned spot irregularly dotted throughout with larger and smaller dark leaden-grey round shining spots. Cilia bright yellow, blackish in tornus. Hind wing whitish, suffused with yellowish posteriorly; an indication of a faint fulvous suffusion on end of fold; cilia pale yellowish, touched with fulvous opposite end of fold.

Tegumen short, depressed. Uncus absent. Socius broad, semiporrect. Transtilla absent. Valva elongate, disc bristled, costa with a very long bristle, cucullus indefinite, sacculus projecting distally in a curved beak, bristled above. Aedoeagus short, spindle-shaped. Cornuti, two moderate spines (Slide No. 625 D).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 21, 1938. One specimen. Nearest to *S. rhopica* MEYRICK, from Assam.

***Spatalistis argyrosperma* spec. nov. (fig. 297)**

*ἀργυρος* = silver, *σπέρμα* = a seed

♂ 15 mm. Head pale ochreous, side tufts yellowish-ochreous mixed with fulvous. Palpus yellowish-ochreous, suffused with pale fulvous. Antenna brownish, scape pale ochreous. Thorax pale ochreous, suffused yellowish-fulvous, tegula light fulvous and lilac-greyish. (Abdomen missing.) Legs pale yellow, anterior knee dark fuscous, anterior tibia and tarsus ringed with blackish, base of tibia above with a pencil of broad lancet-shaped scales appressed to tibia and reaching to its apex. Fore wing elongate-ovate, rather narrow, costa little curved throughout, with a narrow ciliated fold to  $\frac{2}{5}$ , apex pointed, termen sinuate, much oblique. Ochreous-orange scattered with sparse rounded pale ochreous spots, markings suffused ferruginous-lilac, several oblique transverse rows of dark leaden shining round patches. Costal fold pinkish-ochreous, transversely strigulated with dark fuscous; a ferruginous-lilac suffusion along costal third of wing from base to middle, anteriorly extended across wing to middle of disc; along base of wing and along basal fourth of dorsum this suffusion scattered with dark leaden shining rounded spots, posteriorly confluent with a rather narrow suffused oblique transverse fascia; this fascia gradually narrowed below, marked with shining spots and reaching to above dorsum before tornus; anterior edge of fascia with a large angulation on end of cell; an oblique ferruginous-lilac suffusion occupying less than posterior third of wing except apex; anterior edge of suffusion from  $\frac{2}{3}$  of costa to tornus, concave, ill-defined below, posterior edge convex; three dark leaden shining rows of connected roundish spots, from below costa to tornus and termen, first two rows tolerably parallel to anterior edge of above mentioned suffusion, anastomosing with each other at  $\frac{1}{3}$ , third row more curved, thicker, running along posterior edge of suffusion; a transverse row of some three rounded pale ochreous spots at  $\frac{3}{4}$  between costal edge and cell, one more, larger spot beyond cell, smaller such spots irregularly scattered over wing between basal suffusion and central fascia; some four small slightly raised patches of blackish shining scales along fold: one above fold and three below it; posterior half of costa pale ochreous, with four elongate ferruginous-greyish dots. Cilia pale yellowish-ochreous, basal half brighter ochreous; in tornus cilia dark lilac-grey. Hind wing and cilia pale whitish-ochreous, glossy.



♀ 17 mm. Palpus light fulvous. Abdomen pale ochreous. Fore wing slightly more dilated than in male. Evenly olive-grey, transversely strigulated with series of short deep ferruginous-reddish strigulae and dots; costa suffused with reddish-fulvous, transversely strigulated with ferruginous-reddish; a transverse oblique erect-triangular patch on costa beyond middle, slightly inwardly curved below around end of cell, with top rounded, reaching to vein 5; this patch fulvous-orange, in middle with rounded pale ochreous spots, becoming largest in apex of patch; apex of wing and a narrow streak along termen fulvous orange; numerous large and small rounded patches and dots, dark ferruginous-red with leaden-metallic shine, forming undulate, vertical striae on basal  $\frac{2}{3}$  of wing; broader oblique transverse fasciae edging costal patch anteriorly and posteriorly; a curved fascia from  $\frac{4}{5}$  of costa, running before apex to upper part of termen, thence parallel to termen to above tornus, narrowed below, connected by a sinuate narrow shining line with metallic posterior edge of costal patch above middle; moderate patches of black scales scattered over disc. Hind wing and cilia pale golden-ochreous, brighter posteriorly. Otherwise similar to male.

Ostium shallow, sclerotised, cylindrical. Limen, a narrow band curved downward laterally, two moderate bristled folds at the sides of ostium. Ductus bursae simple, short. Bursa copulatrix erect, large. Signum, a strongly curved blade; no capitulum (Slide No. 626 D).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 17, 1938 (holotype, male). Iebèlè Camp, 2250 m, November 11, 1938 (allotype, female). Two specimens. Nearest to *S. nummifera* MEYRICK, from Sudest Island (New Guinea), but distinct by the presence of a costal fold.

*Spatalistis violacea* spec. nov. (fig. 299)

♀ 14 mm. Head, antenna and palpus light yellow, irrorated with violet scales. Abdomen ochreous-greyish. Fore wing rather broad, subtriangular, costa gradually curved, apex pointed, termen sinuate, hardly oblique. Light yellow densely but finely retinate with violet, retination isolating numerous rounded and ovate dots of ground colour arranged in more or less distinct transverse rows; a moderate fascia of denser violet irroration from beyond  $\frac{3}{4}$  of costa to  $\frac{3}{5}$  of dorsum, convex, outwardly preceded along lower  $\frac{2}{3}$  by a narrow somewhat undulate streak of ground colour; two transverse almost vertical rows of ovate spots of ground colour, these rows more distinct at  $\frac{4}{5}$  and just before termen, respectively; base of costa somewhat denser irrorated with violet. Cilia light yellow irrorated with violet scales (imperfect). Hind wing whitish, suffused with pale yellowish along edge, a somewhat brighter yellow spot in tornus with a few marginal violet scales, cilia whitish, tinged with pale yellow.

Tegumen erect, narrowed. Uncus moderate, cuspidate. Socius very long, narrow, clavate, pending. Transtilla absent. Valva elongate, concave,



cucullus with a digitus, sacculus thickened, simple. Aedoeagus robust, straight. Cornuti, three strong spikes (Slide No. 627 D).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 17, 1938. One specimen. Allied to *S. droserantha* MEYRICK, from Assam.

### **Eremas TURNER, 1945**

*Eremas* TURNER, 1945, Trans. Roy. Soc. S. Austrial., vol. 69, p. 71.

### **Eremas polystalagma spec. nov. (fig. 300)**

*πολυ* = much, *στάγμα* = a drop

♂ 16 mm. Head greyish-whitish. Palpus whitish densely mixed and suffused with dark fuscous. Antenna light grey, rather sparsely long-ciliate, ciliations thin, over 2. Thorax white. Abdomen light grey. Fore wing without costal fold, elongate-triangular, costa curved at extremities, tolerably straight in middle, apex rather long, subacute, termen slightly sinuate, considerably oblique. Greyish-white with a silvery gloss, towards base suffused with fuscous-grey, towards apex slightly suffused with leaden-grey; base of costa suffused with fuscous-grey, costal edge fuscous-grey throughout, costal cilia (along posterior half of costa) greyish blotched with dark fuscous; middle of disc from beyond  $\frac{1}{4}$  to end of cell with a longitudinal slightly curved row of small black dots, becoming larger posteriorly, the largest, and more conspicuous dot on lower angle of cell; a second less distinct row of smaller dots below cell from base of wing to  $\frac{2}{3}$  of cell, horizontal; a third row of small transverse black elongate marks just below fold from before base to beyond middle of wing length, ending in a round dot and a small blackish suffusion before end of fold; terminal third of wing from beyond cell rather regularly irrorated with slightly inwardly oblique transverse rows of black interneural points; anterior  $\frac{2}{3}$  of wing with sparse minute scattered black points. Cilia dirty creamy-white, infuscated along costa and opposite apex; an interrupted dark grey antemedian fascia. Hind wing light silvery-greyish, glossy, cilia somewhat lighter.

Tegumen strong, erect. Uncus with broad base, hook bifid. Socius small, rounded. Gnathos strong, arms with a blunt median projection ventrally, top curved, scobinate. Transtilla strong, invert-W-shaped, with robust short labides. Valva rather broad, costa projecting terminally, sacculus with a terminal bristled pad. Aedoeagus moderate, curved, orifice with lower edge projecting in a long point. Cornuti not perceptible (Slide No. 497 D).

Top Camp, 2100 m, January 22, 1939. One specimen.

### **Polyortha DOGNIN, 1905**

*Polyortha* DOGNIN, 1905, Ann. Soc. Ent. Belg., vol. 49, pp. 85-86. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 182, 1929.

It seems preferable to regard this genus as distinct from *Peronea* CURTIS, 1824.

***Polyortha ornithopora* spec. nov. (fig. 302)**

ὄρνις = a bird, πόρος = a feather

♀ 19 mm. Head and thorax white, mixed with dark grey, tegula anteriorly and apical crest suffused with dark grey. Palpus white, median segment with two transverse bands and apical third except extreme apex, dark grey; terminal segment whitish mixed with grey, a broad subapical band, blackish. Abdomen pale golden-ochreous, towards apex above suffused with greyish. Legs white, anterior femur with small longitudinal fuscous streaks, anterior tibia and tarsus blackish, white-ringed. Fore wing elongate-ovate, costa curved throughout, apex pointed, termen slightly sinuate, rather oblique. White, suffused and transversely strigulated with leaden-grey and finely strigulated with light brown, marked with black and partially suffused with dark brown. Costa transversely strigulated with leaden-grey, dotted with black; a small transverse black line beyond base; three larger subtriangular dots beyond this line to middle; first dot largest, continued by an interrupted transverse strigula of black raised scales to fold; a narrow black line indicating edge of a small basal patch, almost straight, slightly inwardly oblique from below costa to above dorsum; transverse undulate black strigulae along fold ending by a suffused greyish-blackish transverse ridge of raised scales from middle of disc to dorsum beyond middle; a broad suffused transverse band at  $\frac{3}{4}$ , slightly inwardly oblique, with anterior edge ill-defined, from  $\frac{2}{3}$  of costa to dorsum beyond middle; posterior edge of this band more distinct, strongly angularly excavate, from about end of vein 9 to beyond lower angle of cell, thence to termen above tornus; this band suffused with dark grey on costa and dorsum, suffused with dark brown in disc, transversely strigulated with raised black strigulae; a vertical black ridge of scales in middle of band from below costa to above dorsum; posterior third of costa with four blackish marks corresponding with dark bars on costal cilia, a rounded jet-black dot below each of the three anterior marks; posterior projection of transverse band in tornus marbled with black; a transverse blotch of blackish retination and dotting before termen from apex to above tornus; terminal area suffused with leaden-grey along veins. Cilia light brown, barred with white, a broad antemedian dark brown fascia, a black patch opposite tornus. Hind wing and cilia light brownish-ochreous, the latter with a faint darker antemedian line.

Ostium broad. Limen sclerotized, rather broad, straight, laterally slightly dentate above. Colliculum annular. Ductus bursae short. Bursa copulatrix erect-ovoid, simple (Slide No. 628 D).

Top Camp, 2100 m, January 29, 1939. One specimen.

## EUCOSMINAE

(Olethreutinae *auctorum*)

The Eucosminae are far less numerous in New Guinea than the Tortricinae, viz., in the proportion of one to three. This fact and its significance were already discussed in part I (pp. 29–30). It may be repeated here that we adopted HEINRICH's view that the Eucosminae must have developed out of the Tortricinae, and not on the contrary.

In the near future we plan to revise the Eucosminae from the western part of the Malay Archipelago, and at that occasion we propose to discuss to some extent the general aspects of the taxonomy of this subfamily. At present we shall confine ourselves to a few remarks.

In connection with the discussion of the distribution of the Eucosminae in the Papuan region as dealt with on p. 29 of part I, we may remark here that the subfamily seems to have obtained a firm foothold in New Guinea. Though this subfamily is not very extensively represented in that island, several endemic genera have developed here. The genus *Hermenius* MEYRICK, also known from India, Ceylon, and Australia, presents a long series of closely allied species from Central New Guinea and in that country apparently is in a stage of rich development.

HEINRICH's division of the family in three subfamilies is adopted by us. We prefer, however, provisionally and tentatively, to adhere not to his nomenclature but to that of T. BAINBRIGGE FLETCHER as laid down in the latter's "*Generic names used in Microlepidoptera*", 1929. Consequently we use the name *Argyroplocini* instead of HEINRICH's Olethreutinae, and *Enarmoniini* instead of Laspeyresiinae, on the strength of the priority of the respective generic names: *Argyploce* HÜBNER 1826 (*Verz.*, p. 379, genotype *arbutella* LINNÉ) supercedes *Olethreutes* WALSINGHAM 1900 (*Ann. Mag. Nat. Hist.*, ser. 7, vol. 6, pp. 127–130, genotype *arcuella* CLERCK), *Olethreutes* HÜBNER 1806 (*Tentamen*, p. 2) is invalid (cf. Opinion 97 of the International Rules of Zoological Nomenclature); *Enarmonia* HÜBNER 1826 (*Verz.*, p. 375, genotype *woeberiana* SCHIFFNER) supercedes *Laspeyresia* HÜBNER (*tom. cit.*, p. 381, genotype *corollana* HÜBNER).

As far as concerns the phylogeny of the three subfamilies, HEINRICH regards the Olethreutinae as being the most primitive, from which both the Laspeyresiinae and the Eucosminae have developed. This opinion finds little support in the characters of the male genitalia, the enarmoniine (= laspeyresiine) type showing close affinities to the peroneine group in the Tortricidae and also to certain Schoenotenidae; this type less closely approaches the male genitalia in the subfamily Choreutinae of the "family" Glyphipterygidae, from which all tortricoid families may have developed. Consequently for the time being we are inclined to regard the Enarmoniini as the oldest group of the Eucosminae; the Enarmoniini link this subfamily with the (ancestral) Tortricinae (see also part I, pp. 29–30).

The tribe Eucosmini is possibly not as highly specialised as has been

surmised by MEYRICK (*Proc. Linn. Soc. N. S. Wales*, vol. 36, p. 224, 1911) in spite of the occurrence of the notched male antennae in certain genera; these genera were regarded by MEYRICK as belonging to a separate "*Spilonota* group", equivalent with the three other "groups", viz. those of *Eucosma*, *Argyroplote* and *Enarmonia*.

We see no reason for this procedure and merge *Spilonota* and allied genera into the Eucosmini. Judging by their genitalia Eucosmini link directly up with Enarmoniini.

#### Key to the subfamilies of Eucosminae<sup>1)</sup>

1. Hind wing with vein 5 straight, almost parallel with 4 . . . . . Enarmoniini  
Hind wing with vein 5 curved at base, approximated to 4 . . . . . 2
2. Hind wing with veins 3 and 4 separate or connate . . . . . Argyplociini  
Hind wing with veins 3 and 4 stalked or united . . . . . Eucosmini

#### Key to the Papuan genera of the Eucosminae

1. Hind wing without cubital pecten . . . . . *Sereda* HEINRICH  
Hind wing with cubital pecten . . . . . 2
2. Fore wing with vein 2 from  $\frac{3}{4}$  or from beyond  $\frac{3}{4}$  of lower edge of cell . . . . . 3  
Fore wing with vein 2 from  $\frac{1}{2}$ - $\frac{3}{4}$  of lower edge of cell . . . . . 4
3. Fore wing with veins 8 and 9 stalked, 2 from  $\frac{3}{4}$  . . . . . *Collogenes* MEYRICK  
Fore wing with veins 8 and 9 separate, 2 from  $\frac{7}{8}$  . . . . . *Crocotola* gen. nov.
4. Hind wing with vein 5 parallel to 4 . . . . . *Enarmonia* HÜBNER  
Hind wing with vein 5 more or less approximated to 4 at base . . . . . 5
5. Fore wing with veins 8 and 9 stalked or closely approximated towards base . . . . . *Articolla* MEYRICK  
Fore wing with veins 8 and 9 separate, seldom moderately approximated . . . . . 6
6. Fore wing with apex falcate . . . . . *Ancylis* HÜBNER  
Fore wing with apex not falcate . . . . . 7
7. Fore wing with veins 7 and 8 stalked . . . . . 8  
Fore wing with veins 7 and 8 separate . . . . . 12
8. Antenna in male with notch . . . . . 9  
Antenna in male without notch . . . . . 10
9. Palpus with terminal segment long. Hind wing with veins 6 and 7 stalked . . . . . *Peridaedala* MEYRICK  
Palpus with terminal segment moderate. Hind wing with veins 6 and 7 closely approximated towards base. . . . . *Hermenias* MEYRICK
10. Thorax with a posterior crest . . . . . *Anathamna* MEYRICK  
Thorax without crest . . . . . 11
11. Hind wing with veins 6 and 7 closely approximated towards base . . . . .  
. . . . . *Acroclita* LEDERER  
Hind wing with veins 6 and 7 stalked . . . . . *Allohermenias*, new genus
12. Antenna in male with notch . . . . . 13  
Antenna in male without notch . . . . . 14
13. Hind wing with veins 6 and 7 stalked . . . . . *Bathrotoma* MEYRICK  
Hind wing with veins 6 and 7 closely approximated towards base . . . . .  
. . . . . *Spilonota* STEPHENS
14. Thorax without crest . . . . . 15  
Thorax with posterior crest . . . . . 18

<sup>1)</sup> Changed, after HEINRICH.

15. Hind wing with veins 3 and 4 separate. . . . . *Bactra* STEPHENS  
Hind wing with veins 3 and 4 connate or stalked . . . . . 16
16. Fore wing with vein 7 to costa . . . . . *Procoronis* MEYRICK  
Fore wing with vein 7 to termen. . . . . 17
17. Palpus ascending . . . . . *Cryptasasma* WALSINGHAM  
Palpus porrect . . . . . *Eucosma* HÜBNER
18. Hind wing with veins 3 and 4 approximated towards base. . . . . 19  
Hind wing with veins 3 and 4 connate or stalked . . . . . 22
19. Hind wing with vein 3 from before angle. . . . . *Metaschistis* gen. nov.  
Hind wing with vein 3 from angle . . . . . 20
20. Hind wing with veins 6 and 7 stalked . . . . . *Polychrosis* RAGONOT  
Hind wing with veins 6 and 7 closely approximated towards base . . . . . 21
21. Fore wing with vein 9 approximated to 8, vein 10 to 11 . . . . .  
. . . . . *Lobesia* STAINTON  
Fore wing with veins 8-11 normal . . . . . *Proschistis* MEYRICK
22. Fore wing with veins 8 and 9 remote, hind wing with veins 3 and 4 connate  
. . . . . *Argyroploce* HÜBNER  
Fore wing with veins 8 and 9 approximated. . . . . 23
23. Hind wing with veins 3 and 4 stalked . . . . . *Pseudogalleria* RAGONOT  
Hind wing with veins 3 and 4 connate . . . . . *Endothenia* HEINRICH

## ARGYROPOLOCINI

*Bactra* STEPHENS, 1834

*Bactra* STEPHENS 1834, Ill. Brit. Entom. Haustell. vol. 4, p. 34; etc.

Key to the Papuan species of *Bactra*

1. Fore wing with termen sinuate . . . . . 2  
Fore wing with termen rounded . . . . . *phaeopsis* MEYRICK
2. Hind wing dark grey, cilia whitish-grey . . . . . *phaulopa* MEYRICK  
Hind wing dark greyish-fuscous, cilia pale straw-ochreous . . . . .  
. . . . . *stramenticia*, spec. nov.

*Bactra stramenticia* spec. nov. (fig. 313)

♀ 21 mm. Head light ochreous-tawny. Antenna serrulate, ciliated, ciliations under 1; pale ochreous, ringed with dark fuscous. Palpus pale ochreous, median segment with a broad brownish-tawny longitudinal streak along upper half from beyond base to apex, terminal segment concealed. Thorax tawny (damaged). Abdomen light fuscous-grey. Legs light greyish-fuscous, anterior blackish-fuscous. Fore wing rather narrow, elongate, pointed, considerably dilated, costa moderately curved towards extremities, less so posteriorly, in middle faintly bent and slightly prominent at  $\frac{3}{5}$ , apex projecting, pointed, termen gently sinuate, considerably oblique. Pale whitish-ochreous, towards base of dorsum and along middle of disc suffused with light tawny, this suffusion dilated posteriorly, not reaching termen; a rather narrow faint streak of dark grey suffusion from  $\frac{1}{3}$  of disc to lower half of apex, running along upper half of cell and between veins 6 and 7, extending somewhat above and below these veins; veins 6 and 7 each marked from beyond cell to termen with a row of black



scales not forming a continuous line; two moderate black dots, on upper and on lower angle of cell respectively; small black points scattered along and below costa, along termen, in and above tornus; dorsal third of wing with minute short transverse dark fuscous strigulae. Cilia pale straw-ochreous; a black point on base opposite apex. Hind wing rather dark grey-fuscous with faint bronze gloss; cilia pale straw-ochreous.

Male genitalia rather similar to those of the genotype (*Bactra lanceolana* Hübner, from Europe). Uncus with top elongate. Socius small, elongate, appressed to uncus. Valva with base little dilated, costa not projecting, cucullus obliquely truncate, sacculus with a round patch of long bristles, followed by a smaller patch of shorter ones, which is continued across disc by a row of some five more bristles. Aedoeagus spheroid (Slide No. 795 D, type).

Letter Box Camp, 3600 m, September 12, 1938. One specimen.

### **Lobesia** STANTON, 1859

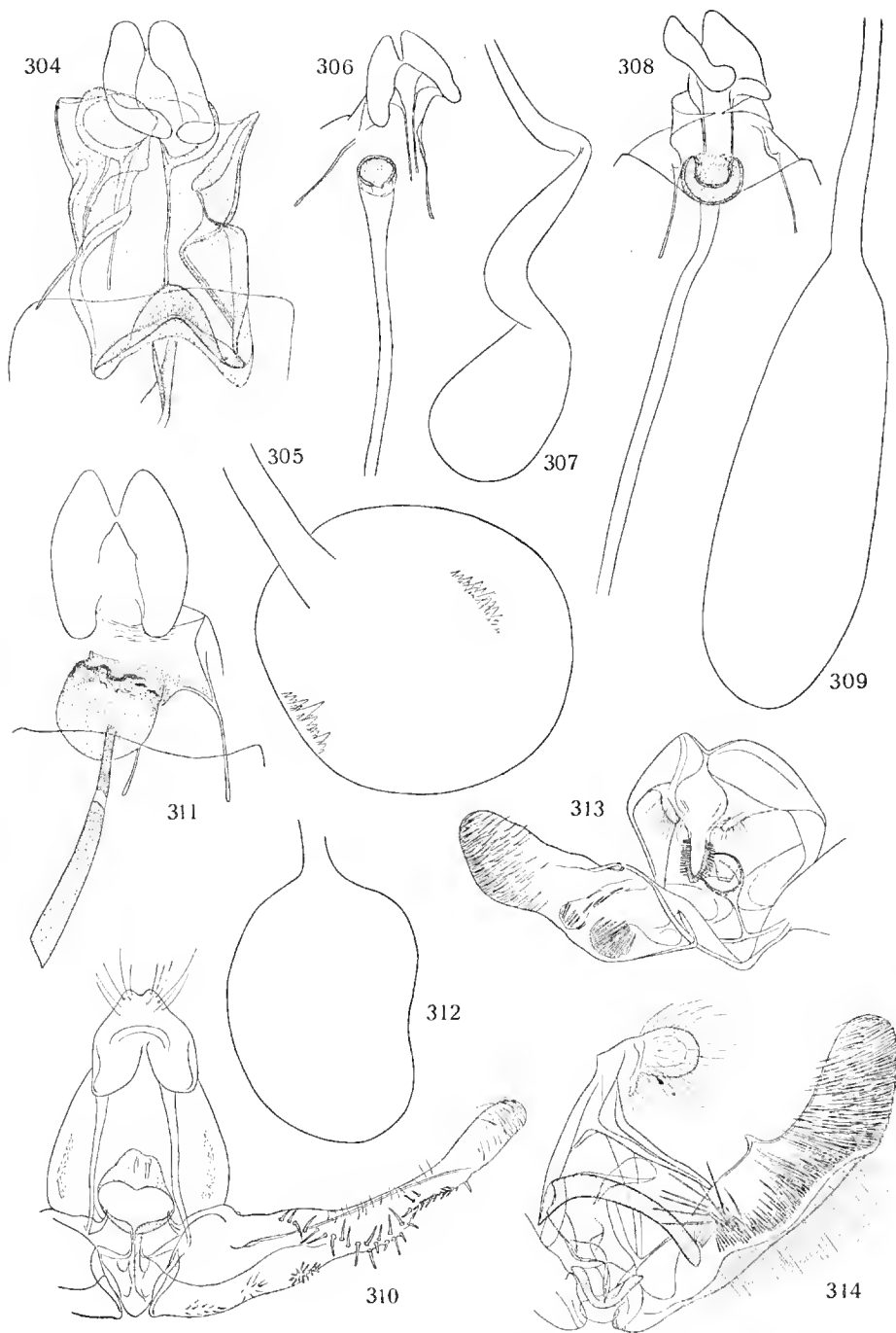
*Lobesia* STANTON, 1859, Manual, vol. 2, p. 266; etc.

#### Key to the Papuan species

1. Fore wing with two conspicuous blackish dorsal blotches, at  $\frac{1}{3}$  and on middle . . . . . *paradisea* spec. nov.
- Fore wing without such blotches . . . . . *tritoma* spec. nov.

### **Lobesia paradisea** spec. nov. (figs. 308, 309, 310)

♂, ♀ 18 mm. Head tawny. Antenna pale ochreous, ringed with dark fuscous. Palpus tawny, basal segment below white, median segment with a dark fuscous basal band, middle of lower edge suffused with pale tawny, upper half irrorated with dark fuscous. Thorax tawny, apex of tegula pale ochreous, scales of posterior crest tipped with blackish. Abdomen dark greyish-fuscous, towards base tawny, anal tuft pale tawny-ochreous. Legs ochreous-whitish, tarsi light tawny, anterior and median tibia and tarsus banded with dark fuscous above. Fore wing elongate-triangular, rather narrow, broader and more dilated in female, costa tolerably straight, slightly bent and prominent, with a small marginal thickening at  $\frac{4}{5}$ , apex rather rounded, termen moderately rounded in male, little rounded in female, moderately oblique. Whitish, touched with pale ochreous, moderately suffused and transversely strigulated with tawny, partially suffused with light leaden-grey; markings light tawny, black and leaden-grey. Basal patch large, formed by an elongate patch from base of costa extending below fold to beyond  $\frac{1}{4}$  of dorsum, and by a moderate subtriangular spot at  $\frac{1}{5}$  of costa; acute top of the latter patch connected with upper edge of the above mentioned dorsal patch before end of that edge; both these spots suffused with tawny and dark leaden-grey, coarsely transversely strigulated and edged with black, edge of spot below fold slightly sinuate,



Genitalia of Eucosminae. Fig. 304: *Metaschistis hemicylica* spec. nov., female, ovipositor and ostium. Fig. 305: *idem*, bursa copulatrix. Fig. 306: *Lobesia tritoma* spec. nov., female, ovipositor, ostium and upper part of ductus bursae. Fig. 307: *idem*, lower part of ductus bursae and bursa copulatrix. Fig. 308: *L. paradisea* spec. nov., female, ovipositor, ostium and upper part of ductus bursae. Fig. 309: *idem*, lower part of ductus bursae and bursa copulatrix. Fig. 310: *idem*, male. Fig. 311: *Metaschistis gypsopa* spec. nov., female, ovipositor and ostium. Fig. 312: *idem*, bursa copulatrix. Fig. 313: *Bactra stramenticia* spec. nov., male. Fig. 314: *Metaschistis cretata* spec. nov., male.

vertical; base of dorsum suffused with tawny; central fascia moderately broad, upper half narrower, outwardly oblique, constricted at  $\frac{1}{3}$  by an angular incision at each side, with posterior edge angularly projecting above incision; central fascia dilated so as to form a rounded patch in middle of disc; dorsal third of central fascia narrower than this patch, with vertical parallel edges; central fascia coloured as follows: upper two-thirds in male, upper third in female, tawny greyish edged with fuscous-black; middle third in female light tawny, dorsal third in the two sexes, black; a slightly curved longitudinal streak traversing fascia below one-third; costal patch large, from  $\frac{3}{4}$  of costa towards lower half of termen, below forming three narrowed short streaks; two anterior streaks to tornus, third streak broader, to  $\frac{3}{4}$  of termen; in male costal patch and these streaks tawny-grey, on upper half of disc suffused with black except on posterior edge of patch below costa; this suffusion forming a pointed anterior projection touching middle of central fascia; in female patch and streaks light tawny, anterior edge of patch above middle of disc with a black irregular mark from below costa to middle of central fascia; costal patch with two elongate blackish dots on costa; two transverse marks, on costa and in apex, respectively, grey in male, tawny in female; these marks connected below costa, apical mark forming an irregular transverse patch along upper half of termen, dotted with whitish below; two small white dots on termen below apex, edged with black, some longitudinal small marks of black irroration in apex and along veins 6 and 7 posteriorly; two dots of glossy whitish ground colour in an oblique series beyond end of cell, smaller and more conspicuous in female; tornal area suffused with pale grey; costa and dorsum between dark markings transversely dotted with dark grey and black, respectively. Cilia with basal third tawny, apical two-thirds tawny-whitish with two-three broad blackish bars opposite middle of termen. Hind wing with veins 6 and 7 stalked; light fuscous-grey, suffused with brownish-fuscous posteriorly, faintly marbled with grey; in male lighter, veins darker, tornal fourth forming a moderate rounded lobe, sparsely clothed with modified fine short hair-scales.

Tegumen membranous. Uncus, a subtrapezoid weak plate, top indented, sparsely fine-bristled, lower edge forming two pendulous lobes. Valva narrow, cucullus elongate, a row of short bristles along lower edge anteriorly; an obliquely-transverse series of strong spikes in disc; sacculus with two patches of sparse short bristles, and a group of short spikes. Aedoeagus very short, subspheroid (Slide No. 808 D, holotype).

Ostium and lumen represented by a spheroid cup with thick wall, ventral side deeply emarginate. Ductus bursae simple, very long. Bursa copulatrix simple, elongate (Slide No. 809 D, allotype).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 14, 1938 (holotype, male), October 19, 1938. Moss Forest Camp, 2600–2800 m, October 9–November 5, 1938 (allotype, female). Two

males, one female. A true *Lobesia* but with colouring and markings considerably differing from the ordinary type.

***Lobesia tritoma* spec. nov. (figs. 306, 307)**

♀ 12 mm. Head light brownish-fuscous. Palpus brownish, basal segment whitish. Thorax pale fuscous, mixed in middle with whitish. Abdomen greyish-fuscous. Legs pale ochreous, anterior and median tibia and tarsus fuscous, pale-ringed. Fore wing elongate, dilated, costa little curved, apex obtuse, termen gently rounded, straight in middle, oblique. Pale tawny-ochreous, partially suffused with tawny, markings fuscous and dark fuscous more or less marked and edged with blackish. Basal patch small, with edge angulate in fold, upper half more oblique than lower half. A moderate oblique wedge-shaped dark fuscous transverse streak from  $\frac{1}{4}$  of costa almost reaching dorsum: a rather irregular central fascia from middle of costa, much dilated below and occupying posterior  $\frac{2}{5}$  of dorsum; upper  $\frac{2}{3}$  of this fascia dark fuscous, finely edged and coarsely irrorated in disc with blackish, remaining portion of fascia forming a rather light greyish-fuscous triangle, anterior lower angle of this triangle with a moderate dark tawny-fuscous spot on dorsum, posterior angle with a smaller similar dot; anterior edge of central fascia with a moderate triangular blackish projection below middle touching following transverse fascia which connects two dark fuscous elongate dots on  $\frac{3}{5}$  of costa with tornus and lower half of termen; lower third of this fascia bifid; edges of fascia undulate, posterior branch constricted above middle; fascia dark fuscous, becoming tawny towards tornus, finely edged with blackish above, interrupted below costa by a longitudinal light tawny streak and irrorated with black above and below this; apical area fuscous, marked with vertical blackish strigulae just before apex and before upper fifth of termen; costa between markings whitish, transversely strigulated with dark greyish-fuscous, three pairs of small whitish marks along posterior fourth of costa. Cilia pale tawny, basal third brighter fulvous-tawny; leaden-grey bars: one on costa before apex and two opposite upper half of termen. Hind wing dark bronze-fuscous; cilia whitish-greyish, basal half fuscous, a fine pale basal line.

Ostium and limen forming a ring, broader ventrally. Ductus bursae long, coiled along lower third, simple. Bursa copulatrix moderate, erect-ovoid, simple (Slide No. 826 D, type).

Rattan Camp, 1200 m, March 4, 1938. One specimen. With markings of the ordinary *Lobesia* type.

***Endothenia* STEPHENS, 1852**

*Endothenia* STEPHENS, 1852, List Brit. Anim. Brit. Mus., vol. 10, p. 28. HEINRICH, 1926, U.S. Nat. Mus. Bull. 132, p. 100, fig. 48. MEYRICK, Rev. Handb. Brit. Lep., p. 565, 1928. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 77, 1929.



***Endothenia simplissima* spec. nov. (fig. 368)**

♀ 14 mm. Head, palpus, abdomen whitish-fuscous, sides of vertex, palpus laterally except towards base somewhat darker fuscous. Antenna fuscous. Thorax (partially denuded) pale tawny-fuscous, shoulder and tegula suffused with darker greyish-fuscous. Legs pale ochreous, anterior and median leg rather suffused with dark fuscous. Fore wing elongate, rather narrow, moderately dilated, broadest at  $\frac{2}{3}$ , costa curved anteriorly, almost straight posteriorly, apex pointed, termen very faintly sinuate, oblique. Pale fuscous, evenly suffused with light fuscous-tawny, faintly clouded with greyish except towards apex and along termen which areas are more ochreous-tinged; a small patch of ill-defined dark fuscous irroration in apex and on termen just below apex. Cilia fuscous-whitish, suffused with pale tawny, more so towards apex, a fuscous subbasal band fading out towards tornus. Hind wing very pale fuscous with faint golden gloss, on posterior half transversely irrorated with somewhat darker fuscous, tornal third except wing margin almost whitish. Cilia fuscous-whitish, a light fuscous subbasal shade.

Ostium a moderately sclerotized large funnel; ostium proper, a round opening in ventral wall of this funnel. Limen a small semioval transverse plate, pointed laterally, upper edge concave; a thickened convex rim above ostium. Ductus bursae rather short, simple. Bursa copulatrix simple (Slide No. 1111 D, type).

Icbèlè Camp, 2250 m, December 1, 1938. One specimen, with vein 5 in hind wing closely approximated to 4 at base. The identification is somewhat doubtful without corresponding male specimens. The genus has been recorded up to now as being confined to the northern Hemisphere.

***Metaschistis*, gen. nov. (fig. 315)**

*μετά* = behind, *σχιστός* = split

Head with appressed scales. Ocellus posterior. Proboscis rather weak. Antenna in male without notch, ciliate, ciliations over 1. Palpus ascending or subascending, median segment triangularly dilated, densely clothed with rather short, little appressed scales more or less projecting above and beneath, terminal segment short. Thorax with a posterior crest. Fore wing without raised scale-tufts, without costal fold in male. 1b furcate to before  $\frac{1}{3}$ , 2 from  $\frac{2}{3}$ , 3 from angle, closely approximated to 4, 5 parallel, 7 separate, to termen, 7-9 rather approximated, 10 halfway between 9 and 11, 11 from  $\frac{1}{2}$ , parting vein originating from beyond base of vein 11, to below base of vein 5. Hind wing with cubital pecten, 2 from middle, 3 from before angle, 4 from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Tegumen rather weak, erect-triangular. Uncus moderate, weak, covered with hair-scales, top rounded. Socius very small, pending. Gnathos weak, moderate or long, porrect. Anus membranous, plicate. Transtilla absent.



Valva narrow, cucullus elongate, moderately curved upward, top rounded, sacculus with a dense large brush of fine hairs. Aedoeagus rather long, moderately broad, little sclerotised, gradually curved, top rounded. Anellus long, erect.

Ostium broad. Limen well-developed, mostly forming a T-shaped or erect-ovate median plate. Ductus bursae moderately long, rather narrow, cestum represented by one or more plicate sclerotized pieces. Bursa copulatrix spheroid, often very large, on the inside clothed with fine needles. Signa absent.

Typus generis *Metaschistis sappiroflua* spec. nov., male, female.

Allied to *Proschistis* MEYRICK, 1907, differing by the origin of vein 3 in hind wing, and to *Herpystis* MEYRICK, 1911, but with thoracic crest well-developed; furthermore differing from both these genera by ascending or subascending palpi. Vein 3 originates distinctly from before angle, viz.

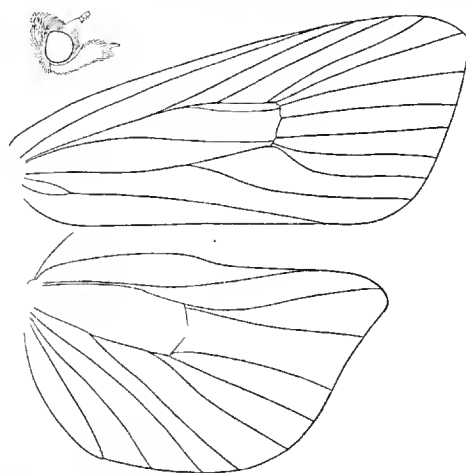


Fig. 315: *Metaschistis sappiroflua* gen. nov., spec. nov., male, head and wing venation.

from about  $\frac{5}{6}$  of the distance between 2 and 4, but is not, as in *Herpystis*, remote from 4, and parallel. The angle of the cell proper, i.e. the origin of vein 4, can easily be traced when observing the origin of vein 5 just above that point: 4 and 5 are equal in length, but 3 is distinctly longer (cf. fig. 315). Without carefully tracing the origin of vein 5, the situation of veins 3 and 4 can easily be misinterpreted, as these veins are seemingly connate. It is not impossible that the species of the present genus were met with before; they might have been erroneously attributed to *Proschistis*.

The following eight species when studied superficially represent a heterogeneous lot, as to their colouring and markings; the venation, however, is quite constant, and we do not hesitate to bring them together in the present genus. Six of the eight species have in common a series of single whitish short transverse costal strigulae.

Key to the species of *Metaschistis*

1. Ground colour reddish-orange or crimson-fulvous . . . . . 2  
Ground colour not thus . . . . . 3
2. A large semicircular whitish spot on middle of costa . *hemicyclica* spec. nov.  
No such spot . . . . . *purpurescens* spec. nov.
3. Ground colour blackish, markings shining or whitish blue-lead . . . . . 4  
Ground colour not blackish, no metallic-blue markings . . . . . 5
4. A strongly outwards oblique blue-lead patch from  $\frac{3}{5}$  of costa, reaching  $\frac{3}{4}$  towards tornus . . . . . *sappirolua* spec. nov.  
A white, twice bent transverse band from  $\frac{1}{3}$  of costa to tornus . . . . .  
. . . . . *cretata* spec. nov.
5. A small but conspicuous white discal dot . . . . . *gypsopa* spec. nov.  
No such dot . . . . . 6
6. Basal half of wing pale ochreous, sharply edged with black, terminal half smoky violet-blackish . . . . . *hemicapnodes* spec. nov.  
Not thus . . . . . *haematina* spec. nov.

***Metaschistis hemicyclica* spec. nov. (figs. 304, 305)**

$\eta\mu$  = half,  $\kappa\acute{\alpha}\lambda\omicron\varsigma$  = circle

♀ 20 mm. Head grey, tips of scales pale grey. (Palpi missing.) Antennae fuscous, pale ochreous towards base, scape grey. Thorax grey suffused with light brownish, tips of tegulae and apex paler (damaged). Abdomen greyish-fuscous, anal tuft pale ochreous. Legs fuscous-grey, irrorated, anterior tibia and tarsus blackish, pale-ringed, posterior leg whitish. Fore wing triangularly-ovate, broad, costa gradually considerably curved, apex subobtusate, termen moderately sinuate, almost vertical. Orange-fulvous, along middle of costa suffused with pale ochreous-yellowish; along dorsum and before termen suffused with somewhat glossy pale lilae; basal half suffused with blackish-violet, darker towards costa and base. A large regularly semioval white patch occupying less than central half of costa, reaching to centre of wing, along costal edge transversely strigulated and dotted with blackish-violet becoming yellowish posteriorly; an oblique transverse costal spot before middle, reaching to middle of white spot; this transverse spot pale ochreous-yellowish, suffused on costa and along lower edge with blackish-violet; a smaller semioval spot on costa before termination of white patch, with a small transverse appendix from its top; this spot yellowish, suffused with dark violet along costa; an elongate spot of dark grey irroration in middle of white patch well above its lower edge; a minute white mark on costa beyond median white patch; pale violet suffusion before termen forming a large triangular, ill-defined patch, with anterior edge inwardly oblique, lower edge horizontal; a row of brownish-violet triangular dots along dorsum. Cilia bright orange-fulvous. Hind wing greyish-fuscous, paler towards base, darker fuscous towards apex, cilia pale greyish-fuscous.


Eighth segment broad, elongate, forming a strong cylindre, which is deeply emarginate and erect ventrally. Limen, a triangular short-haired

body, being ventral edge of above mentioned emargination. Ductus bursae moderate. Cestum, an elongate folded plate. Bursa copulatrix large, spheroid. Signa, clusters of dense, large hyaline bristles (Slide No. 800 D, type).

Top Camp, 2100 m, February 8, 1939. One specimen.

***Metaschistis hemicapnodes* spec. nov. (fig. 323)**

$\eta\mu$  = half,  $\kappa\alpha\tau\nu\acute{o}\delta\eta\varsigma$  = smoky

♂ 20 mm. Head and palpus dark fuscous-grey, face pale ochreous. Antenna brownish-fuscous, ciliations over 1, scape blackish. Thorax dark fuscous-grey (damaged). Abdomen pale greyish-fuscous, anal tuft whitish-ochreous. Legs pale ochreous-fuscous, anterior and median tibia and tarsus dark-fuscous, ochreous-ringed. Fore wing triangular, broad, costa considerably curved throughout, apex subobtuse, slightly prominent, termen sinuate, little oblique, dorsum curved and prominent at  $\frac{1}{4}$ . Deep smoky greyish-black, tinged with blue-metal colour and lilac, somewhat glossy; markings pale ochreous dotted and retinate with light brownish, partially edged and marked with black. A large subovate pale ochreous patch, occupying about anterior half of costa, reaching about  $\frac{3}{4}$  across wing; posterior edge of patch  slightly rounded and almost reaching to upper angle of cell, with lower edge horizontal, along  $\frac{2}{5}$  of disc, with an angulate projection in middle to halfway between fold and dorsum, with top truncate; this edge dotted and retinate with light brownish, broadly edged below with black except along top of projection; posterior edge with a marginal black line dilated on costa; black marks: a moderate patch on upper  $\frac{2}{3}$  of wing base, a narrow transverse curved streak from  $\frac{1}{5}$  of costa to fold beyond base; a row of costal and a row of smaller subcostal dots; two moderate, erect-ovate pale ochreous blotches irrorated with tawny and blackish-fuscous, first slightly inwardly oblique, well before upper half of termen, second vertical, above termen; between these blotches a pair of pale ochreous points and a curved transverse little oblique line; this line dull dark fuscous, slightly mixed below with pale ochreous, running from about middle of disc to tornus; posterior half of costa edged with black; five pale ochreous single or double small dots along costa; extreme terminal edge with a series of minute elongate-semilunar narrow pale ochreous marks, becoming more distinct towards apex. Cilia dull fuscous-black, tinged lilac, a few tips of scales white. Hind wing light greyish-fuscous; cilia pale fuscous, basal third fuscous.

Gnathos moderate, hook ending in a round plate. Valva dilated, broadest at  $\frac{2}{3}$ , densely bristled, a submarginal, little oblique, dense brush of short bristles along middle third; a group of fine bristles at base. Aedoeagus rather short (Slide No. 801 D, type).

Scree Valley Camp, 3800 m, January 24, 1938. One specimen.

**Metaschistis haematina** spec. nov. (figs. 318, 319)*αἱμάτωος* = bloody

♀ 21 mm. Head dark brown, mixed in middle and along sides of vertex with white. Antenna blackish, finely ringed with whitish, scape dark brown, apex mixed with white. Palpus deep brown, median segment gradually becoming very dark brown posteriorly, along upper edge mixed with white towards apex; terminal segment moderately long, slender, dark brown with white base and a lighter brown postmedian ring. Thorax dark crimson-brown, a whitish subapical spot on each side, posterior crest and apical half of tegula reddish-fulvous. Abdomen pale greyish-ochreous, posterior  $\frac{2}{3}$  suffused with grey above. Legs, anterior blackish, median leg dark grey, posterior leg light ochreous-grey, anterior and median tarsi white-ringed. Fore wing triangular-subovate, broad, costa moderately curved anteriorly, considerably curved posteriorly, apex rather rounded, slightly prominent, termen slightly concave above, rounded beneath, little oblique. Blackish-fuscous, partially suffused and spotted anteriorly with tawny-olive, posteriorly spotted with pale ochreous-pink; marked with black and deep brownish-crimson, scattered throughout except in disc and on upper posterior half with glossy pale blue small dots. A deep brownish-crimson suffused streak below anterior  $\frac{2}{5}$  of costa; an oblique broad patch of tawny-ochreous suffusion becoming tawny-olive on lower half; this suffusion running from below second fifth of costa to middle of dorsum, strongly narrowed below, upper half and costal edge (which remains dark fuscous) transversely strigulated with glossy pale blue: this suffusion edged in middle of disc anteriorly with a whitish suffusion; dorsal half of wing before this oblique patch regularly irrorated with pale blue; a pair of suffused round dots of ground colour below costa posteriorly; oblique patch mentioned above followed by a large rounded blotch of ground colour somewhat beyond middle of wing, not irrorated with pale blue, broadly connected above anteriorly with costa before middle; lower edge of blotch acutely angulate, not reaching dorsum; from middle of its posterior edge arises a hardly curved streak to apex; this streak not irrorated with pale blue, blackish-fuscous above, deep brownish-crimson below; this colour penetrating into preceding patch and dotted with blackish on this place; posterior half of wing suffusedly edged with ground colour; this edge broader in apex and along termen; remaining surface occupied by pale ochreous-pink suffusion, which forms a less defined elongate-triangular patch above, with somewhat inwardly curved top to upper angle of cell, and a large erect-rectangular patch below; these two patches sharply separated by the crimson and blackish streak to apex, mentioned above; an elongate transverse inwardly oblique moderate black spot above tornus; pale ochreous-pink patches and marginal ground colour irrorated with pale blue, this irroration forming three double and two small, single transverse marks on costa. Cilia dark fuscous, an interrupted antemedian line of white irroration, apical third with a row of



transverse white streaks. Hind wing light bronze-fuscous, becoming darker towards apex and costa. Cilia light fuscous, turning pale fuscous towards tips.

Limen represented by a broad plate, with dilated, short-haired lower and rolled up upper part. Ductus bursae simple. Bursa copulatrix moderate. Signa two clusters of acute thorns (Slide No. 802 D, type).

Moss Forest Camp, 2600—2800 m, October 9—November 5, 1938. One specimen.

***Metaschistis purpurescens* spec. nov. (fig. 321)**

♀ 15—20 mm. Head and thorax light ochreous, suffused with dark mouse-grey, vertex paler. Palpus blackish, suffused with purplish-violet. Antenna brownish. Abdomen pale ochreous, suffused with purplish-violet posteriorly. Legs bright ochreous-yellowish, tibiae ringed with dark brown, posterior femur pale violet. Fore wing ovate-triangular, strongly dilated, costa little curved anteriorly, strongly curved posteriorly, apex somewhat pointed, slightly projecting, termen slightly concave below apex, gradually convex over more than lower half, little oblique. Pale ochreous, suffused with light-carmine-violet and slightly suffused with reddish-fulvous, markings blackish-brown. Basal  $\frac{3}{5}$  of wing evenly suffused with light carmine-violet; this colour angularly extended along costa to  $\frac{2}{3}$  and along dorsum to tornus; an elongate patch of fulvous suffusion reaching, beyond cell along veins 3—5, a small suffused patch of the same colour on base of 7 and 8 below cell posteriorly; base of costa narrowly suffused with blackish, dotted with black beyond this suffusion to middle; two large strongly suffused semioval black dots on  $\frac{3}{5}$  of costa: three smaller dots between these, first and second dots connected by a cloudy dark grey suffusion with top of a moderate, somewhat suffused, slightly undulate streak running from below  $\frac{2}{3}$  of costa to  $\frac{1}{5}$  of dorsum, slightly dilated towards extremities; a narrow ill-defined streak of greyish suffusion from  $\frac{1}{3}$  of costa to dorsum beyond middle, slightly dilated below fold; posterior fourth of costa with a pale yellowish-grey elongate-oval patch reaching to apex, in apex more yellowish-tinged; rounded area of ground colour on posterior third of wing finely transversely strigulated with blackish-brown; a small narrow projection above cell between veins 8—9; an inwardly oblique ridge of raised white scales along closing vein, dilated below; longitudinal blotches before upper part of termen, formed by suffused blackish streaks on veins posteriorly; a narrow curved interrupted premarginal projection almost to tornus; a light greyish somewhat curved transverse streak on lower half of disc at  $\frac{4}{5}$ ; terminal edge with a pale ochreous line, regularly dentate between veins anteriorly. Cilia deep greyish violet, tinged with carmine, paler towards tornus, apical half mixed with fuscous. Under side of fore wing in both sexes bright yellow along edge, this colour followed by carmine-violet, centre of wing dark-brown.



Limen, an invert-subtrapezoid transverse plate, with lower angles rounded; a deep median incision forming a thickened groove, upper edge plicate, embossed. Ostium situated at the bottom of this groove, small. Colliculum, a long plate, narrowed distad (Slides No. 460 D, holotype, No. 827 D, paratype).

Moss Forest Camp, 2600–2800 m, October 13, 1938 (holotype). Five km northeast of Lake Habbema, 2800 m, October 19, 1938. Two female specimens. Mist Camp, 1800 m, January 8, 1939. One female specimen, slightly differing, but according to the genitalia, conspecific. Closely allied with preceding, and according to the genitalia also with *M. sappiroflua* spec. nov.

***Metaschistis sappiroflua* spec. nov. (figs. 315, 316, 317, 320)**

♂ 18 mm. Head black, densely irrorated with whitish. Antenna dark fuscous, suffused with black towards base, scape black; ciliations 2. Palpus strongly dilated, roughish, ascending and appressed to face: black, median segment with apical fourth above finely densely irrorated with whitish. Thorax fuscous-black, tips of scales whitish, in middle anteriorly suffused with greyish-fuscous. Abdomen dark fuscous-grey, base paler. Legs greyish, anterior and median tibia and all tarsi black above, white-ringed. Fore wing elongate-subtriangular, costa moderately curved throughout, apex subobtuse, thorax hardly concave, almost straight, little oblique. Black, markings formed by pale blue glossy irroration; markings white on costal edge. A dark fuscous longitudinal suffused patch below costa anteriorly; a small spot of pale blue irroration on costa beyond base; two pairs of small transverse white marks at  $\frac{1}{3}$  of costa, connected below by a semi-circular streak of pale-blue irroration reaching  $\frac{1}{3}$  across wing; two small transverse white marks on  $\frac{3}{5}$  of costa, more approximated than preceding marks, connected below with an outwardly oblique strongly clavate patch of pale blue irroration running just beyond upper angle of cell and closing vein to below cell about halfway between this and termen; this patch gradually rounded below, with edge well-defined, a conspicuous small longitudinal bluish-whitish spot on upper angle of cell adjacent to above mentioned patch; three small white marks on costa between preceding spot and apex, connected below costal edge with small pairs of pale-bluish marks; anterior half of dorsum as far as fold with three narrow equidistant longitudinal lines of pale bluish irroration, lower line marginal, not reaching base of dorsum; these three lines forming together an elongate-ovate patch; a small subtriangular less distinct mark on  $\frac{3}{4}$  of dorsum, a pair of bluish scales above this; two inwardly oblique irrorated short transverse streaks in tornus, posterior one less oblique; a triangular moderate spot on termen somewhat above middle, centred with ground colour. Cilia black with broad bars of white irroration, a narrow fuscous

basal line. Hind wing light bronze-fuscous, cilia fuscous, a dark fuscous antemedian shade.

Gnathos almost membraneous. Socius absent. Valva narrow, not dilated; cucullus sparsely covered with strong bristles, with a patch of dense fine bristles in  $\frac{1}{3}$  of disc; a small patch of long bristles before base of sacculus. Aedoeagus long (Slide No. 812 D, holotype).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 30, 1938 (holotype, male). One specimen. A distinct species.

♀ 17 mm. Legs somewhat paler, greyish-fuscous. Fore wing broader, more dilated, costa considerably curved, more so posteriorly, apex sub-acute, termen gently sinuate, hardly oblique.

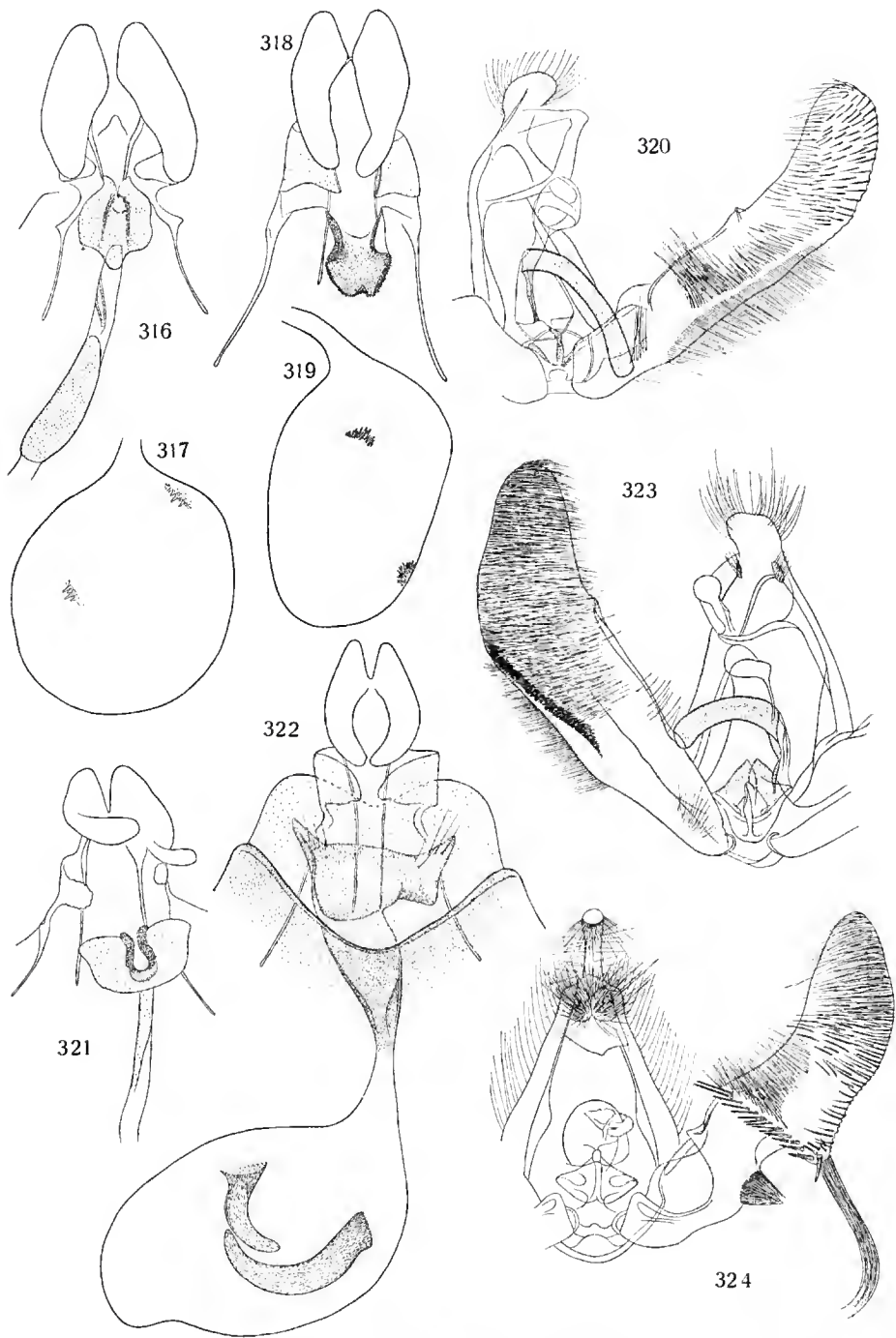
Limen, a moderate rounded plate with two curved points above, separated by a deep incision, and with a rounded projection below; two submedian thickened longitudinal ridges; outside these ridges the plate finely scobinate. Ostium small. Ductus bursae long. Cestum represented by a small piece and by an elongate plate above middle. Bursa copulatrix spheroid. Signa, two groups of some three hyaline teeth (Slide No. 813 D, allotype).

Sigi Camp, 1500 m, February 24, 1939 (allotype, female). One specimen. Strongly damaged, but obviously being the sex-partner of the described male.

***Metaschistis gypsopa* spec. nov. (figs. 311, 312)**

*γύψος* =, gypsum ♂ *ψ* = eye

♀ 22 mm. Head dark greyish-fuscous, tips of scales whitish. Antenna dark fuscous, fulvous towards base. Palpus dark fuscous-grey, median segment slightly sprinkled with white above, terminal segment with white base and tip. Thorax fuscous-grey mixed with pale fuscous. Abdomen light ochreous-greyish. Legs light greyish-ochreous. Anterior and median tibia and tarsus dark fuscous-grey, pale-ringed. Fore wing elongate, triangular-ovate, costa curved, more so posteriorly, apex rather rounded, termen straight, little oblique, dorsum rounded and slightly prominent towards base. Dark fuscous, irregularly spotted with yellowish-whitish, densely irrorated and transversely banded throughout with glossy pale blue. Costa with a row of small double or single transverse marks, pale blue anteriorly, becoming white posteriorly, ending well before apex; an irregular spot of pale yellowish suffusion below  $\frac{2}{5}$  of costa, indistinctly continued by a transverse streak to middle of cell and thence continued posteriorly along parting vein; a larger whitish-yellowish elongate spot below  $\frac{3}{4}$  of costa and a smaller elongate spot halfway between cell and termen at  $\frac{2}{3}$  of wing breadth; a conspicuous pale yellowish-white transversely ovate dot on closing vein, edged and contrasted below posteriorly by a larger elongate blackish spot; some ill-defined blackish-fuscous interrupted irregular transverse striae across middle of wing; an elongate blackish mark along fold beyond middle, dilated and edged with pale



Genitalia of Eucosminae. Fig. 316: *Metaschistis sappiroflua* spec. nov., female, ovipositor and ostium. Fig. 317: *idem*, bursa copulatrix. Fig. 318: *M. haematina* spec. nov., female, ovipositor and ostium. Fig. 319: *idem*, bursa copulatrix. Fig. 320: *M. sappiroflua* spec. nov., male. Fig. 321: *M. purpurescens* spec. nov., female, ovipositor and ostium. Fig. 322: *Argyroploce hemeronyx* spec. nov., female. Fig. 323: *Metaschistis hemicapnodes* spec. nov., male. Fig. 324: *Argyroploce leucocteis* spec. nov., male.

yellowish anteriorly; pale blue irroration, denser along fold anteriorly, running along terminal area and across  $\frac{4}{5}$  of wing, where it forms almost continuous broad band connecting two pale yellowish posterior spots; this band curved outwardly, extended above tornus, but less dense. Cilia deep bronze-fuscous, moderately speckled with pale ochreous. Hind wing fuscous, paler towards base, darker towards apex; cilia pale fuscous, a dark fuscous antemedian shade. Ostium a very broad, short cylindre; its dorsal wall formed by a rounded plate; its ventral wall formed by a rather narrow transverse finely scobinate band, being the limen, with a thickened undulate transverse fold above. Ductus bursae narrow. Cestum, two long tubular sclerotizations. Bursa copulatrix moderate, simple (Slide No. 803 D, type).

Moss Forest Camp, 2600–2800 m, October 9–November 5, 1938. One specimen, somewhat damaged.

***Metaschistis cretata* spec. nov. (fig. 314)**

♂ 21 mm. Head black, finely slightly mixed with greyish. Antenna pale ochreous, ciliations  $1\frac{1}{2}$ , scape black. Palpus rather slender, black, inner side grey. Thorax whitish, tinged pale yellowish. Abdomen light greyish-fuscous, anal tuft pale ochreous. Legs pale ochreous, anterior tibia and tarsus dark fuscous-grey, median tibia and tarsus infuscated above, both ringed with pale fuscous. Fore wing elongate-subtriangular, costa gradually considerably curved, apex little rounded, termen gently sinuate, hardly oblique. Dark fuscous, irrorated with whitish, more so posteriorly, spotted with dull leaden-grey, markings white, partially suffused with pale yellowish-tawny. Base of dorsum with a small projecting tuft of scales, pale yellowish-whitish: a strongly sinuate transverse fascia with broad upper half, running obliquely from  $\frac{2}{5}$  of costa to above fold, projecting to below  $\frac{1}{3}$  of fold (this projection inwardly oblique) and suffused with ground colour there; lower half of fascia much narrowed, running horizontally along and below lower edge of cell to  $\frac{3}{4}$  of wing, angulate there, to tornus; upper edge of fascia rather suffused, with a small projection along closing vein, lower edge well-defined, dentate; this fascia encloses a large elongate-semioval patch of ground colour on dorsum reaching above fold, faintly spotted with leaden-grey and transversely strigulated with blackish-fuscous; a small transverse pale yellowish spot just below middle of fold; a longitudinal streak of pale yellowish suffusion in cell across central fascia, becoming deeper yellowish-tawny posteriorly, and edging central fascia to above tornus; a moderate, irregular subtriangular costal patch before  $\frac{3}{4}$ , white, irrorated with dark fuscous posteriorly, almost touching upper angle of cell; anterior edge of costal patch well-defined, emarginate in middle, top of patch slightly suffused with tawny-yellowish; an irregular bluish-leaden-grey spot in middle of disc between preceding and upper edge of central fascia; a fainter leaden-grey suffusion beyond



costal patch below costa; costa dotted with dark ground colour along white markings, sparsely dotted with white posteriorly; apical and terminal area irrorated with whitish, transversely strigulated with dark fuscous; a curved somewhat suffused narrow white streak parallel to posterior part of central fascia and almost connected with it below, running from about vein 7 to termen above tornus. Cilia (imperfect) dark fuscous, white along upper half of termen and opposite tornus, with a dark bar in tornus. Hind wing brownish-fuscous, a transverse dark fuscous suffusion in apex and along upper fourth of termen; cilia dark greyish-fuscous with a pale basal line.

Gnathos long, porrect, without hook. Valva rather narrow, hardly dilated, costa with a pointed projection beyond middle, cucullus rather densely bristled, a group of strong long bristles in disc at  $\frac{1}{3}$ , a small bristled knob before this group. Aedoeagus long, slender (Slide No. 805 D, type).

Sigi Camp, 1500 m, February 18, 1939. One specimen.

### **Anathamna MEYRICK, 1911**

*Anathamna* MEYRICK, 1911, Proc. Linn. Soc. N.S. Wales, vol. 36, p. 261; etc

#### Key to the Papuan species of *Anathamna*

1. Fore wing with a large snow-white patch in middle of dorsum . . . . .  
     . . . . . *chionopyra* spec. nov.  
     No such patch . . . . . 2
2. Fore wing with a deep brown basal patch . . . . . *anthostoma* MEYRICK  
     Fore wing without such patch . . . . . *ostracitis* MEYRICK

### ***Anathamna chionopyra* spec. nov. (fig. 327)**

$\chi\acute{\iota}\omicron\nu$  = snow,  $\pi\tilde{\upsilon}\rho$  = fire

♀ 13.5 mm. Head, palpus and thorax fulvous, tips of scales pale ochreous on thorax, which is tinged with fuscous in middle, terminal segment of palpus greyish. Antenna ringed with dark fuscous, scape fulvous. Abdomen light ochreous, suffused with greyish. Legs pale ochreous, anterior and median tibia and all tarsi dark fuscous, pale-ringed. Fore wing elongate, moderately broad, costa considerably curved throughout, less so before apex, apex rounded, projecting, termen sinuate, moderately oblique. Brownish-fulvous, faintly suffused with darker brown in middle, evenly sprinkled with pale ochreous and in middle of disc minutely sprinkled with white, apical third of wing not irrorated, orange-fulvous;  $\frac{2}{3}$  of costa with about eight narrow oblique dark brown strigulae contrasting with minute transverse silvery-white strigulation on costa between these; posterior half of costa with four pairs of small, wedge-shaped white oblique marks; posteriorly these marks becoming more approximated to each other, thus pairs becoming narrower but more distinct, anterior



mark of each pair becoming shorter; first pair continued by a parallel pair of moderate oblique leaden-grey lines; second and third pairs each with a more oblique leaden-metallic line which lines coalesce below costa so as to form one metallic oblique line; this line merging below costa into a leaden-metallic vertical streak running from posterior pair of white costal marks to above tornus, gradually thickened downward, edging ocellus posteriorly; anterior edge of ocellus formed by a vertical leaden-metallic streak somewhat thickened in middle and running from below middle of disc to above dorsum before tornus; an elongate-semioval snow-white patch occupying more than middle third of dorsum, almost reaching to middle of disc; anterior edge of this patch well-defined; its upper edge slightly suffused, subconcave, with a small round dark brown patch of raised scales in middle which penetrates into white patch; posterior edge of patch somewhat more suffused, deeply indent on dorsum; dorsum before patch with a short longitudinal dark brown streak, beyond patch obscured with fine transverse dark brown strigulation connecting patch with ocellus; ground colour slightly darker around patch and forming a hardly perceptible brown suffusion which connects patch with middle of costa and is narrowed above; two small triangular dark brown marginal marks: in tornus and on termen above tornus. Cilia dark brown, tips of scales narrowly pale ochreous, basal half orange-fulvous with a narrow ochreous-whitish basal line, an ochreous-fulvous bar below apex. Hind wing greyish-bronze-fuscous; cilia greyish-fuscous, with a dark fuscous subbasal shade.

Limen very broad, with punctulate surface. Ostium, a sclerotized, shallow plate. Ductus bursae short, almost entirely occupied by a plicate cestum. Bursa copulatrix ovoid. Signum small, dentiform (Slide No. 788 D, type).

Iebèlè Camp, 2250 m, November 17, 1938. One specimen.

### *Argyroploce* HÜBNER, 1826

*Argyroploce* HÜBNER, 1826, Verz. bek. Schmett., p. 379.

*Olethreutes* HÜBNER, 1806, Tentamen, p. 2 (*non descript.*)

*Olethreutes* WALSINGHAM, 1900, Ann. Mag. Nat. Hist., ser. 7, vol. 6, pp. 127-130.

### Key to the Papuan species of *Argyroploce* *sensu* MEYRICK <sup>1)</sup>

- |   |                        |
|---|------------------------|
| 1. Hind wing blackish with an orange transverse band . . . . .                            | 2                      |
| Hind wing fuscous, grey or blackish, without orange band . . . . .                        | 3                      |
| 2. Olive, markings crimson . . . . . <i>mitlographa</i> subsp. <i>mitloxantha</i> MEYRICK |                        |
| Tawny-orange, markings leaden-purplish. . . . .   | <i>eximiana</i> WALKER |
| 3. Hind wing with black markings . . . . .  | 4                      |
| Hind wing without black markings . . . . .  | 5                      |

<sup>1)</sup> *Argyroploce drymoptila* (LOWER, 1920) is not included as its appearance in the Bismarck Islands seems dubious to us.

4. Hind wing with terminal black fascia. . . . . *confertana* WALKER  
Hind wing with black patch below cell . . . . . *talaris* DURRANT
5. Hind wing in male with a dorsal lobe; fore wing with costa strongly prominent  
at  $\frac{3}{4}$  . . . . . *rebellis* MEYRICK  
Not thus . . . . . 6
6. Hind wing in male with tornus prominent or with a separate tornal lobe . . . . . 2  
Hing wing in both sexes of normal shape . . . . . 10
7. Hind wing in male with a strong rounded tornal lobe, margin incised before  
it, in female hind wing very narrow . . . . . *lamyra* MEYRICK  
Hind wing with prominent tornus but without tornal lobe in male . . . . . 8
8. Hind wing dark grey; fore wing with a round white patch in tornus . . .  
. . . . . *aprobola* MEYRICK  
Hind wing fuscous or brown; fore wing without white patch in tornus . . . . . 9
9. Basal patch, central fascia (not reaching dorsum), costal patch, well-developed  
. . . . . *ergasima* MEYRICK  
A small spot on costa at  $\frac{1}{4}$ , an elongate large costal patch along posterior  
half, two undulate transverse streaks on dorsum below costal spot . . . .  
. . . . . *crossotoma* MEYRICK
10. Hind wing grey. . . . . 11  
Hind wing fuscous, sometimes black posteriorly . . . . . 21
11. Fore wing with a tuft of long raised pale scales on closing vein . . . . .  
. . . . . *oedalea* MEYRICK  
No such scales on closing vein . . . . . 12
12. Fore wing with a large costal patch conspicuously paler or darker than  
remainder of wing. . . . . 13  
No such patch . . . . . 15
13. Costal patch white, edged below with black . . . . . *amoebea* LOWER  
Costal patch darker than remainder of wing . . . . . 14
14. White, markings black. . . . . *piratodes* MEYRICK  
Yellow, markings brownish . . . . . *ancalota* MEYRICK
15. A dark dorsal blotch reaching above middle of wing *cremnocrates* MEYRICK  
No such blotch . . . . . 16
16. Markings partially metallic-lead, purplish or blue . . . . . 17  
No metallic markings . . . . . 19
17. Large species: 21 mm; large apical area reddish-ferruginous, two transverse  
wedge-shaped spots on costa . . . . . *turmaria* MEYRICK  
Smaller species: 13-17 mm; apical area not thus coloured . . . . . 18
18. Posterior tibiae densely tufted . . . . . *scaristis* MEYRICK  
Posterior tibiae not tufted . . . . . *thystas* MEYRICK
19. An outwardly oblique dark bar from middle of costa reaching halfway across  
wing. . . . . *limenosema* MEYRICK  
No such marking . . . . . 20
20. Suffused with black, a whitish sinuate fascia from costa before middle to  
dorsum . . . . . *catarrhactopa* MEYRICK  
Not thus . . . . . 21
21. Fore wing pure white, markings jet-black . . . . . *hemeronyx* spec. nov.  
Not thus . . . . . 22
22. Posterior tibia snow-white . . . . . *albitibiana* SNELEN  
Posterior tibia not snow-white . . . . . 23
23. Olive, olive-green or partially green-tinged. . . . . 24  
Without any olive or green tinge . . . . . 29
24. Dove-grey marked with olive-green; a single conspicuous white dot on end  
of cell . . . . . *margaritopa* spec. nov.  
No such white discal dot . . . . . 25

25. Central fascia moderately broad, distinct . . . . . 26  
 Central fascia absent . . . . . 27
26. Discal blotch not connected with termen . . . . . *herbifera* MEYRICK  
 Discal blotch connected with middle of termen . . . . . *arctosceles* MEYRICK
27. Costa broadly suffused with brownish throughout . . . . . *spclaeodes* MEYRICK  
 Costa not thus suffused or suffused with white . . . . . 28
28. A large irregular olive patch on middle of costa reaching below middle of disc  
 . . . . . *semiculta* MEYRICK  
 A white suffusion on middle of costa . . . . . *charidotis* DURRANT
29. Fore wing with metallic-lead, purplish or blue markings. . . . . 30  
 Fore wing without metallic markings . . . . . 35
30. Dark grey, large dorsal and tornal snow-white patches . . . . .  
 . . . . . *chionodelta* MEYRICK  
 Not thus . . . . . 31
31. Ground colour dark fuscous . . . . . 32  
 Ground colour not dark fuscous . . . . . 33
32. Metallic markings leaden-coloured and roughened . . . . . *pachnodes* MEYRICK  
 Metallic markings light blue, not roughened . . . . . *rivulosa* spec. nov.
33. Ground colour brown, margins suffused rosy-crimson . . . . . *erotias* MEYRICK  
 Not thus . . . . . 34
34. Dorsal three-fourths with purplish-fuscous marbling. . . . . *parasema* MEYRICK  
 Undefined brownish suffusion in disc and in tornus . . . . . *pyrrhocrossa* MEYRICK
35. Hind wing with a large pecten of pale scales below cell (in male only?) . .  
 . . . . . *leucocteis* spec. nov.  
 Hind wing without such pecten . . . . . 36
36. Central fascia present . . . . . 37  
 Central fascia absent . . . . . 38
37. Central fascia narrow, connected with a longitudinal loop between this and  
 middle of termen . . . . . *operosa* MEYRICK  
 Central fascia moderately broad . . . . . *harmonica* MEYRICK
38. A small elongate ovate spot on costa beyond middle, triangular dots between  
 this and apex. . . . . *crossota* MEYRICK  
 No such spot, costa with a series of small transverse marks throughout . .  
 . . . . . *batrachodes* MEYRICK

**Argyroploce hemeronyx spec. nov. (figs. 322, 330)**

*ἡμέρα* = day, *νύξ* = night

♂ 18 mm, ♀ 19 mm. Head jet-black, face white, sides of tufts on vertex white. Antenna black, scape white below. Palpus white, apex of median segment and terminal segment entirely, jet-black. Thorax white, a trapezoidal black patch anteriorly, posterior half irrorated with black, crest jet-black, patagia medianly black, pectus white. Abdomen greyish-fuscous, paler towards base. Legs white, posterior leg greyish-fuscous, anterior and median tibia and tarsus black, white-ringed, all coxae white, dotted with black. Fore wing with moderate tufts of raised scales; no costal fold in male; fore wing rather broad, subovate-truncate, costa moderately curved throughout, more curved in female towards base, apex rounded-rectangular, termen moderately concave above, rounded beneath, almost vertical. Snow-white, in tornus tinged pale ochreous,

markings jet-black, glossy along their costal third and in tornus, dull elsewhere. Costa beyond base with a moderate transverse erect-rectangular spot, a pair of black dots between its lower edge and fold, costal edge minutely dotted before and beyond this spot; in male this spot small, triangular, more black dots beneath this, costal edge more dotted with black; a larger slightly inwardly oblique triangular spot on  $\frac{1}{4}$  of dorsum, with acute top to fold, ending in a small tuft of raised scales, base connected anteriorly by a narrow blackish streak along dorsum with base of wing; a broad transverse fascia occupying second fourth of costa, to dorsum just before tornus, gradually narrowed downward, margins strongly undulate; anterior margin edged by a row of small raised white scale-tufts, lower extremity of margin outwardly curved; less than apical fourth of wing black, edge slightly oblique above and below, in middle erected into a wedge-shaped, slightly oblique projection merging into central fascia below middle; a small semioval or elongate-rectangular costal patch at about  $\frac{2}{3}$ ; costal markings, except subbasal spot, finely dotted with white along costal edge, two larger transverse white costal marks before apex; a small interrupted white line in male, or a series of white scales in female, along upper half of termen; a curved wedge-shaped spot of pale ochreous ground colour in tornus, irrorated with black above; a few black scales along dorsal edge. Cilia black, tips of scales white, opposite tornus cilia light grey. Hind wing deep bronze-fuscous, paler towards base, apex suffused with black, basal  $\frac{3}{4}$  of costa white; cilia greyish-fuscous, becoming darker towards apex, basal third dark fuscous with a fine pale basal line.

Tegumen erect, scaled along edge. Uncus and socii united, weak, scaled, top shortly indent. Socius absent. Gnathos large, with arms quadrate dilated below, hook ending in a round plate. Valva with a narrow basal half, cucullus abruptly dilated and angulate below, top gradually narrowed; valva densely bristled, bristles gradually becoming large spikes anteriorly, a separate group of such spikes in middle of disc; sacculus with a brush of extremely long bristles. Aedoeagus moderate. Anellus and juxta very strong (Slide No. 797 D, holotype).

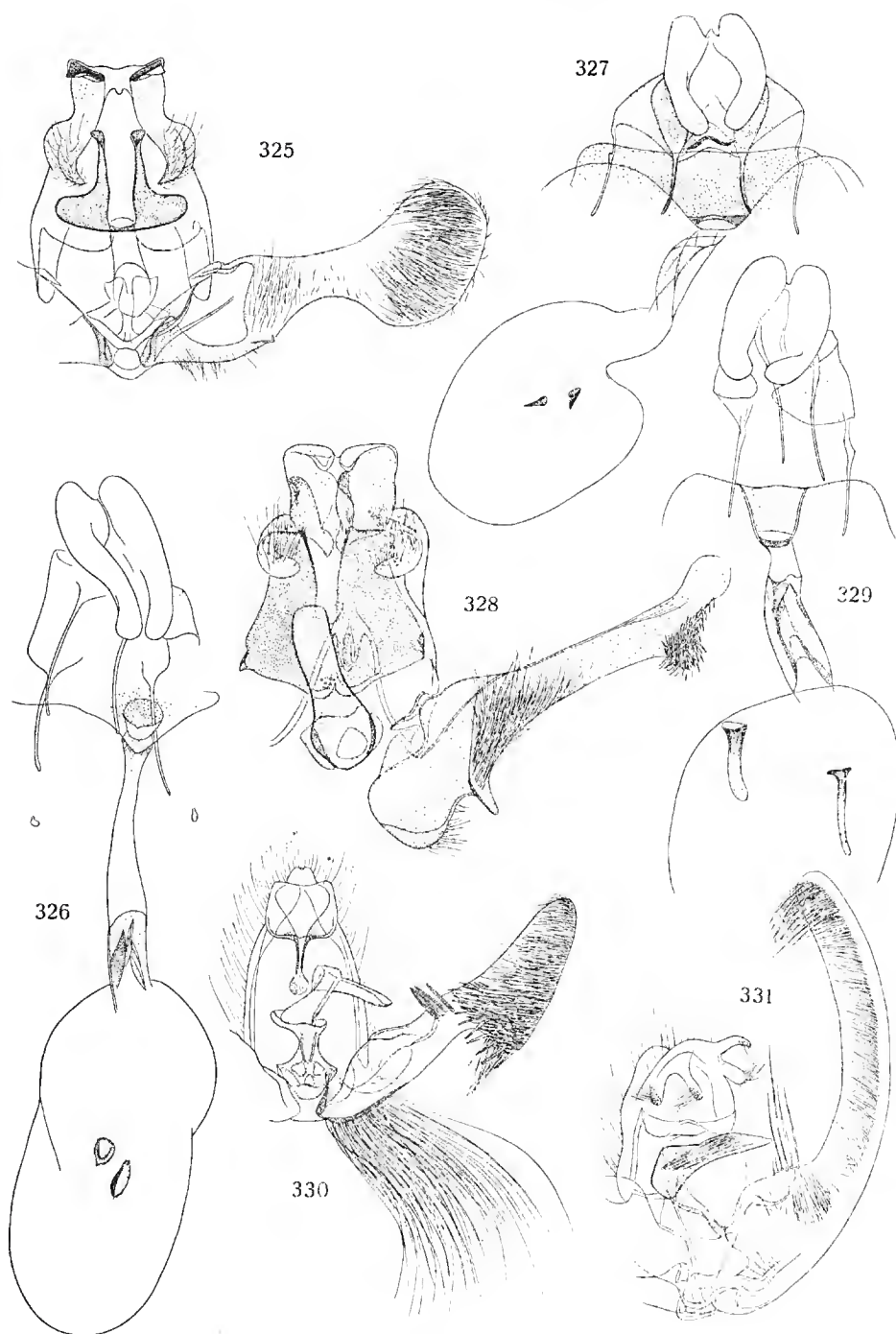
Sixth and seventh ventrites sclerotized, very broad, edge emarginate, that of sixth ventrite thickened. Ostium, a large trapezoid sclerotized body with finely corrugated surface, upper edge bristled laterally; genital opening wide, continued by a strong long funnel. Limen indefinite. Ductus bursae very short. Bursa copulatrix large. Signa extremely large, finely corrugated, horn-like, unequal (Slide No. 798 D, allotype).

Iebèlè Camp, 2250 m, November 1938 (holotype, male). Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 15, 1938 (allotype, female). Two specimens. A very distinct species.

***Argyroploce margaritopa* spec. nov.**

*μαργαρίτης* = pearl, *ὄφθ* = eye

♂ 21.5 mm. Head light grey tinged greenish, face pale tawny, vertex



Genitalia of Eucosminae. Fig. 325: *Peridaedala hierograptæ* MEYRICK, male. Fig. 326: *idem*, female. Fig. 327: *Anathamna chionopyra* spec. nov., female. Fig. 328: *Peridaedala crastidochroa* spec. nov., male. Fig. 329: *P. archæa* spec. nov., female. Fig. 330: *Argyroploce hemeronyx* spec. nov., male. Fig. 331: *A. rivulosa* spec. nov., male.



posteriorly suffused with pale tawny. Antenna fuscous, darker towards apex, pale ochreous towards base, scape light grey, tinged greenish. Palpus tawny-whitish, posterior half of median segment and entire terminal segment light greenish-grey. Thorax pale tawny somewhat suffused with greenish-grey anteriorly except on tegulae. (Abdomen missing.) Legs and pectus whitish-ochreous, coxae mixed with black, tibiae and tarsi suffused with tawny, black-banded. Fore wing broad, dilated, truncate, costa curved, rather oblique to  $\frac{2}{3}$ , apex obtuse-rectangular, termen sinuate above, broadly rounded beneath, vertical. Dove-grey, touched with bluish, paler towards costa, darker deep dove-grey on dorsum anteriorly, markings olive-green, black and white. Base of wing suffused with pale tawny, this suffusion irregularly projecting along fold, less extended along dorsum than along costa; extreme base of costa greenish-grey; a black oblique transverse streak from costa beyond base to above dorsum well beyond base, almost interrupted at  $\frac{1}{3}$  by a small pale tawny longitudinal streak with rounded top; lower extremity of this streak almost parallel to dorsal edge; this edge pale ochreous tawny; an elongate small black spot on costa beyond this streak, preceded and followed by minute greyish and black dotting on costa, below connected with a suffused ochreous-tawny spot; an ovate spot of dark greenish-grey suffusion along second fourth of dorsum, hardly reaching fold; central fascia moderately broad, sharply edged, from costa somewhat before middle to dorsum beyond  $\frac{3}{4}$ , upper three-fourth oblique, lower fourth vertical; anterior edge of fascia with upper half straight, oblique, in middle of wing with a large pending arrow-head-shaped projection, slightly inwardly oblique, top rounded, reaching well below fold, base horizontal; edge of fascia below this projection bent in middle, convex above dorsum; posterior edge of central fascia oblique and moderately bent below costa, rectangularly emarginate just above middle, thus forming two rectangular projections which enclose a snow-white subquadrate spot; lower projection connected by a rising branch with  $\frac{2}{3}$  of costa; lower half of posterior edge of central fascia sinuate; central fascia dark olive-green, paler in disc below middle, with a black longitudinal streak above middle of disc, anterior margin edged with a narrow pale ochreous line: above middle, along lower part of pending projection and above dorsum; posterior branch of fascia dark olive-green with lower third black: dilated almost to form a circle below costa, abruptly narrowed beyond white discal spot; a small suffused olive spot above middle of disc before central fascia, separated from this fascia by pale ochreous line mentioned above; central fascia posteriorly edged by a narrow white suffused line dilated to a white suffused streak above tornus; an erect patch of greenish-grey suffusion before termen not reaching costa and tornus, touching central fascia above; costa anteriorly white with blackish transverse marks, posteriorly dark olive green with white marks, on central fascia finely dotted with black; indistinct whitish dots on termen above middle. Cilia ochreous-grey. Hind wing fuscous,

apical and terminal fourths pale ochreous-whitish. Cilia whitish, around fuscous part of wing with dark fuscous basal half.

Iebèlè Camp, 2250 m, November 7, 1938. One specimen. Possibly allied with *A. arctosceles* MEYRICK.

*Argyroploce rivulosa* spec. nov. (fig. 331)

♂ 21 mm. Head black. Antenna greyish-fuscous, suffused with black above. Palpus dark greyish-fuscous, basal segment paler, median and terminal segments slightly suffused with whitish posteriorly, black-edged and tipped. Thorax blackish-fuscous, slightly mixed with whitish in middle, pleurae light pearl-grey. Abdomen dove-grey, anterior half with sides and venter glossy white, anal tuft long, fuscous-grey. Legs: anterior and median legs whitish below, above dark bronze-fuscous and pale-ringed; posterior leg clothed with long dense hairs above and beneath, compressed laterally, light pearl-grey, tarsus bronze-fuscous. Fore wing subtriangular, costa considerably curved, more so towards apex, apex rounded-rectangular, termen straight above, rounded beneath, almost vertical. Blackish-fuscous, costa almost black, markings glossy bluish-lead. Basal patch formed by two-three transverse bands of irregular bluish-lead dots and marks, projecting above middle posteriorly; a broad transverse slightly outwardly curved band from  $\frac{1}{3}$  of costa to dorsum before middle, beginning with two double converging streaks on costa, in disc formed by irregular scattered, partially interconnected spots and marks; anterior edge of this band with a subquadrate projection below fold, a pair of isolated irregular spots above fold posteriorly; a moderate curved almost continuous, slightly serrate transverse fascia beginning with a pair of narrow lines on costa before  $\frac{2}{3}$ , to tornus; this fascia slightly dilated below, interrupted by dark fuscous veins above middle of disc, in middle of disc preceded by three small longitudinal marks; median mark on upper angle of cell, terminating anteriorly in a small transverse whitish mark along closing vein; lower mark almost confluent with markings above fold mentioned above; four narrow transverse streaks along costa between transverse fascia and apex, becoming less oblique and longer posteriorly; first streak continued by a sinuate interrupted line, almost horizontal above, curved posteriorly, to  $\frac{1}{3}$  of termen; second and third streaks running into first; fourth streak before apex, bifid above, sinuate below, to termen below apex; bluish-lead markings, except basal ones, each with a pair of small white lines on costal edge, which become more distinct posteriorly. Cilia dark grey, around apex and along upper half of termen with a black subbasal streak. Hind wing dark fuscous, cells 1a and 1b white. Cilia greyish-fuscous, basal third darker, along dorsum elongate, pale greyish-ochreous, a long pencil of pale ochreous hairs on base of dorsum; anal veins with long grey hairs above.

Tegumen rather short, scaled. Uncus weak, bipartite: two bristled

rather distant projections. Socius moderate, porrect. Gnathos a transverse band. Valva long, rather narrow, gradually curved upward, costa with a series of long bristles beyond base, sacculus weak. Aedoeagus moderate. Cornuti a sheaf of long spines. Anellus long (Slide No. 811 D, type).

Araucaria Camp, 800 m, March 28, 1939. One specimen.

### **Argyroploce lamyra**, MEYRICK 1911

*Argyroploce lamyra* MEYRICK, 1911, Proc. Linn. Soc. N.S. Wales, vol. 36, pp. 268-269. Bomb. Journ. Nat. Hist. Soc., vol. 21, p. 870, 1912.

Distribution: New Guinea: Woodlark Island, Sudest Island. Ceylon.

Bernhard Camp, 50 m, October 17, 1938. One male, differing from the original description in colouring of the cilia in fore wing which are lilac-erimson with a basal and an apical black lines.

In that description the termen of fore wing is recorded as being nearly straight and vertical; this applies, however, only to the female; the termen in male is considerably rounded. This elegantly coloured species shows a remarkable aberrantly shaped hind wing in male: the wing is strongly narrowed and has a tornal and a dorsal separate lobes.

### **Argyroploce harmonica** (MEYRICK, 1905)

*Platypleplus harmonica* MEYRICK, 1905, Journ. Bomb. Nat. Hist. Soc., vol. 16, p. 584.

*Argyroploce philocompsa* MEYRICK, 1921, Zool. Meded. Mus. Leiden, vol. 6, p. 158.

*Argyroploce harmonica*, DIAKONOFF, Bijdragen Dierk., vol. 28, p. 136, 1949.

Distribution: Ceylon; Java.

Sigi Camp, 1500 m, February 17, 1939. One female, with fore wing slightly broader and with posterior half more tinged with dark brown, instead of fulvous than in the specimens from Java, but otherwise quite alike.

### **Argyroploce leucocteis** spec. nov. (fig. 324)

*λευκός* = pale, *κτεís* = a comb

♂ 22 mm. Head, palpus and thorax fuscous-grey, face paler below, vertex grey, tuft above face blackish, basal segment of palpus and base of median pale yellowish-whitish, median segment with two black marks in middle of upper edge, thorax tinged tawny, pectus pale sandy-ochreous-whitish. Abdomen dark fuscous, anal tuft below pale ochreous, venter paler ochreous anteriorly. Legs pale sandy-ochreous-whitish, posterior tibia and tarsus with extremely large, dense scale-brushes dorsally, grey becoming whitish towards tip of tarsus. Fore wing elongate-subtruncate, broad, dilated, costa considerably curved anteriorly, straight posteriorly, apex subrectangular, termen faintly concave above, vertical, rounded beneath. Whitish-tawny anteriorly, lilac posteriorly, densely streaked with dark fuscous, edged with pale tawny-whitish lines; costa with

numerous oblique transverse fuscous streaks alternating with groups of oblique lines, running horizontally along upper third of disc, undulate, edged with pale tawny-whitish, separated by narrow undulate lilac lines of ground colour; a more distinct streak from  $\frac{1}{4}$  of costa, another streak beyond this; third streak beginning with an oblique wedge-shaped fuscous mark before middle of costa with two tawny-whitish points on costal edge, continued below by a fuscous-tawny streak marked with longitudinal blackish-fuscous lines, running to upper angle of cell, strongly curved and dilated thence, to termen above tornus; a tawny-fuscous broader streak from beyond this streak to termen below apex; three oblique longitudinal dark brown marks alternating with minute dark brown strigulae originating from beyond preceding streak and running to before apex, continued below by fuscous-tawny streaks merging in preceding streak; a vertical larger dark brown mark in apex; numerous horizontal dark fuscous lines more or less edged with pale tawny-whitish in disc and along edges of cell, to closing vein, thence more or less following veins to termen, partially separated by lilac streaks; a transverse streak of blackish-fuscous irroration over closing vein, edging a small white tuft of slightly raised scales in its middle; a subtriangular dark fuscous suffused patch on dorsum before tornus, reaching  $\frac{1}{3}$  across wing, slightly streaked with blackish, edged anteriorly by a pair of oblique tawny-whitish lines; dorsum not streaked, tawny-fuscous irrorated with dark brown, suffused with blackish at base, mixed with ferruginous beyond base, edged above by a zig-zag pale streak; a moderate tawny suffusion above fold posteriorly and another transverse similar suffusion halfway between cell and termen; termen with a curved vertical dark brown line in middle, whitish from this to apex. Cilia pale tawny, paler towards apex, with suffused blackish-fuscous bars opposite middle of termen and dorsum; an interrupted suffused dark fuscous ante-median fascia. Hind wing dark bronze-fuscous, somewhat paler towards base; a large dense brush of dark fuscous hairs mixed with pale tawny on veins 1a and 1b; a pecten of long ochreous-whitish scales below cell and vein 3 from halfway veins 2 and 3 to before termen. Cilia pale greyish-whitish, basal third dark fuscous with a pale basal line; in tornus cilia modified, short and dense, glossy ochreous-whitish.

Tegumen triangular, erect, scaled. Uncus with a moderate projection densely bristled below apex ventrally. Socius short, flattened, appressed. Tegumen, a weak transverse band. Valva with a bristled narrowed cucullus, with base angularly projecting below, from this point originates a pencil of long pending bristles; sacculus rather weak, ending in a round patch of dense bristles. Aedocagus short, bulbate. Anellus strong (Slide No. 810 D, type).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 15, 1938. One specimen. Very closely allied to *A. paragramma* MEYRICK, from Java, distinct by the presence of the pale pecten in hind wing.



## EUCOSMINI

**Peridaedala** MEYRICK, 1925 (fig. 332)

*Peridaedala*, MEYRICK, 1925, Exot. Microl., vol. 3, p. 139. DIAKONOFF, Treubia, vol. 19, pp. 186-187, 1948.

A renewed study of both sexes of *P. hierograptia* MEYRICK necessitates us to make the following redescription of this peculiar genus.

Head with long hairs, very dense and rough, little appressed on vertex, more appressed on face. Ocellus posterior. Antenna with scape rather long, smooth, stout in male, rather slender in female, flagellum in male distinctly thickened, gradually tapering towards apex, minutely ciliate beneath, basal sixth strongly flattened dorso-ventrally and dilated, beyond base forming a rounded lobe which projects rostrad, and is followed by a

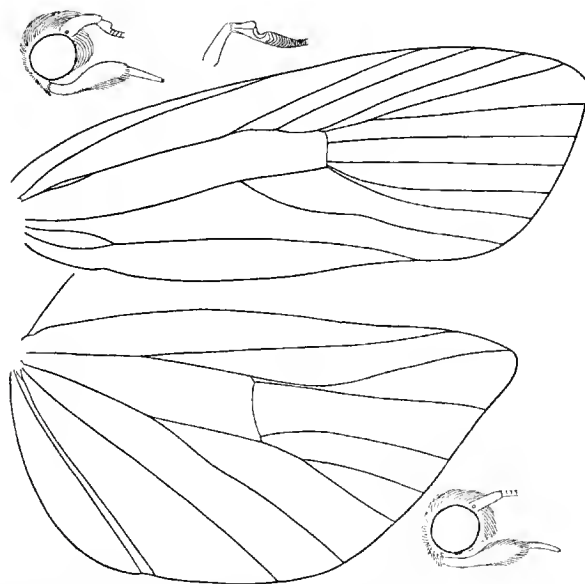


Fig. 332: *Peridaedala hierograptia* MEYRICK, head and antennal notch (dorsal aspect) in male (above), wing venation and head female (below).

deep notch, flagellum rather abruptly narrowed beyond this; flagellum in female normal, minutely pubescent. Palpus long, somewhat longer in female, median segment compressed laterally, ascending, dilated with dense scales; these scales rather appressed above, roughly projecting beneath, especially in female; terminal segment long, smooth, slender, cylindrical, porrect, about  $\frac{1}{2}$  of median (in *P. crastidochroa* under  $\frac{1}{2}$ ). Thorax without crest. Abdomen in male of *crastidochroa* with lateral pencils of long hairs on sixth and seventh segments. Fore wing in male with a costal fold to  $\frac{2}{3}$ , without raised scale-tufts; 1b furcate at base, 2 from  $\frac{3}{4}$  of lower edge of cell, 3 and 4 closely approximated in male, short-stalked in female, from angle, 5 close to 4, straight, horizontal,



parallel to 6, 7 and 8 stalked, 7 to termen, 9 approximated, 10 nearer to 11, 11 from beyond middle of cell. Hind wing in male sometimes of modified shape: with a tornal lobe and thick scaling in tornus on the under side, (*crastidochroa*); with cubital pecten; 2 from middle of cell, 3 and 4 stalked from angle, 5 closely approximated, 6 and 7 closely approximated towards base (in the two sexes) or sometimes stalked (in male).

Tegumen strong. Uncus short, upper edge curved downward, indent in middle, sometimes forming two short median lobes. Socius rigid, sub-pending, narrowed, top curved mediad. Gnathos very strong, being a heavy rising transverse plate, deeply incised in middle, with two horn-like projections above. Transtilla absent. Valva narrow, more or less constricted beyond middle; cucullus transversely dilated, bristled, sometimes dentate along edge; saccus with an apical blunt projection. Aedoeagus short, straight, base bulbate. Ostium cup-shaped. Ductus bursae moderate or short with a short cestum, represented by a complicated plicate sclerotized structure at its base. Bursa copulatrix large, spheroid, with two large nail-shaped signa.

Typus generis *P. hierograpta* MEYRICK 1925 (New Guinea).

This genus can possibly be derived from *Spiloteuthis*. Allied to *Hermenias*. The following four genera form a natural group. The most specialised is *Peridaedala* which is endemic in New Guinea, together with *Allohermenias* gen. nov.

#### Key to the known species of *Peridaedala*

1. Ground colour whitish, suffused with fuscous, no traces of greenish. . . . . *hagna* DIAKONOFF  
Ground colour light green or distinctly suffused with greenish . . . . . 2
2. Two triangular dark brown spots on dorsum, a small cloudy dark grey suffusion below middle of costa . . . . . *archaea* spec. nov.  
Not thus . . . . . 3
3. Inwardly oblique, narrow, sinuate, interrupted transverse black streaks . . . . . *hierograpta* MEYRICK  
Scattered, ovate, rounded, crescentic or quadrate spots, or complete transverse fasciae. . . . . 4
4. Discal spots black, not interconnected . . . . . *crastidochroa* spec. nov.  
Discal spots brownish, interconnected so as to form an irregular fascia from costa beyond middle to  $\frac{1}{4}$  of dorsum and a preterminal transverse streak . . . . . *prasina* spec. nov.

#### *Peridaedala hierograpta* MEYRICK, 1925 (figs. 325, 326, 332)

*Peridaedala hierograpta* MEYRICK, 1925, Exot. Microl. vol. 3, pp. 139-140 (male).

Distribution: British New Guinea, Hydrographer Mountains, 2500 feet.

Uncus broadly truncate, with strong folds at the sides. Socius curved, pointed. Gnathos strong, an invert-T-shaped plate, stalk bipartite, forming two straight rising horns, dilated above. Valva moderately constricted, cucullus broad, transversely-ovate; distal projection of saccus small. Aedoeagus short (Slide No. 778 D).

Ostium, a small cup. Ductus bursae moderate. Bursa copulatrix elongate. Signa conical, with obtuse top, edge serrate (Slide No. 779 D, neallotype).

Mist Camp, 1800 m, January 12–13, 1939. One male, 21 mm, one female, neallotype, 19 mm. Sexes uniform, with dark markings slightly varying, but very similar to MEYRICK's type of this species.

***Peridaedala crastidochroa* spec. nov. (figs. 328, 335)**

*χράσις* = lay, *χρῶς* = colour

♂ 21 mm, ♀ 19 mm. Head and thorax yellowish-greenish in male, pale green in female, a large central round black spot on thorax and shoulder. Antenna light ochreous, in male scape and base of flagellum as far as notch, in female base of flagellum: black. Palpus greenish-yellowish in male, pale green in female, basal segment irrorated with blackish, median segment with a broad subbasal transverse band and a small subapical lateral spot of black irroration. Abdomen grey, in male becoming dark grey posteriorly, with long lateral pencils of dark grey hairs on segments 6–8, directed caudad (in female abdomen missing). Legs greyish-ochreous, posterior leg whitish-ochreous, more or less irrorated with fuscous-blackish. Fore wing elongate, rather narrow, dilated, slightly broader in female; male with a strong costal fold to  $\frac{2}{5}$ , concealing dense whitish hairs; costa moderately curved anteriorly, flattened along fold, slightly projecting at its end in male, almost straight posteriorly in female, apex subobtusate, termen gently sinuate in male, stronger sinuate in female, little oblique. Bright green, tinged yellowish in male, markings black, narrowly edged with pale whitish-greenish. Male with costal fold black with a few isolated dark ferruginous scales towards lower edge; costa with two small dots beyond fold; a moderate inwardly-oblique subrectangular erect blotch before termen reaching to below middle of disc, bifid above, arms to costa before apex and to apex, respectively; in female costa with two moderate erect-rectangular transverse spots, posterior spot beyond  $\frac{1}{5}$ ; these spots alternating with two minute points, first point on extreme base; a third transverse rectangular spot beyond middle, preceded by some four small points, followed by a point and a small triangular dot at  $\frac{2}{3}$ ; preterminal blotch more slender than in male, tridentate above, arms parallel, thickened, especially posterior arm, ending in apex; other markings tolerably similar in both sexes: a moderate longitudinal, sometimes interrupted spot on base above fold and a shorter spot on base of dorsum; a curved inwardly oblique transverse series of three spots at or before  $\frac{1}{3}$ ; in male upper of these spots small, just below fold, two lower spots triangular, approximated, lowest spot larger, on dorsum beyond  $\frac{1}{4}$ ; in female upper spot crescentic, two lower spots narrow, erect, interconnected; a pair of two larger crescentic spots in disc somewhat beyond middle, longitudinal, concave above, extremities slightly erected; a small central spot just beyond cell; a larger semiovate, slightly oblique subdorsal spot before

termen and a moderate marginal streak in tornus and along lower half of termen, dilated below. Cilia dull light greenish. Hind wing with veins 6 and 7 short-stalked in male, closely approximated towards base in female; rather dull dark bronze-grey; cilia pale greyish, basal half fuscous with a pale basal line.

Uncus with a median incision and two moderate median lobes. Socius weak, with top obtuse. Gnathos huge, subtrapezoid, darkly sclerotised, with a deep median incision, upper edge horizontal, apical projections blade-like, slightly tortuous. Valva with dilated basal part, narrow in middle, cucullus clavate above, with a bristled projection below; sacculus  $\frac{1}{4}$ , with edge sinuate, apical projection flattened. Aedoeagus with strongly bulbate base (Anellus, juxta and vinculum destroyed by some insect). (Slide No. 780 D, holotype).

Anal segments in female sclerotized. Limen with a bulbate median pending structure with a thick rim. Ductus bursae extremely short. Bursa copulatrix sclerotized. Signa short, dentiform, acute, base dilated. (Slide No. 782 D, allotype).

Iebèlè Camp, 2250 m, November 28, 1938 (holotype, male). Top Camp, 2100 m, January 25, 1939 (allotype, female). Two specimens.

***Peridaedala prasina* spec. nov. (fig. 333)**

*πράσινος* = light green

♂ 16–18 mm. Head and palpus whitish-greenish, touched with pale yellow; palpus with basal segment, two transverse irrorated bands of median segment and extreme base of terminal segment, dark brown. Antenna pale ochreous. Thorax pale greenish, mixed with white, anterior half of thorax and basal half of tegula fuscous. Abdomen dark grey posteriorly, pale greyish-ochreous anteriorly, anal tuft light greyish-ochreous. Legs pale greyish-ochreous, anterior and median tibia and tarsus dark fuscous above, pale-ringed. Fore wing elongate, narrower than in preceding species; costal fold very strong, to before  $\frac{2}{3}$ , thickened; costa moderately curved at extremities, hardly curved in middle, slightly prominent on end of fold, apex subacute, termen gently sinuate, moderately oblique. Pale whitish-greenish, evenly suffused throughout with light olive-green, markings dark brown. Costal fold pale whitish-greenish, edges and base suffused with dark brown, cilia appressed, light grey; a group of about four irregular elongate marks on base, discal pair transverse, other longitudinal; an inwardly oblique transverse moderate fascia before  $\frac{1}{4}$ , ending on dorsum by a well-defined quadrate dark brown dot; a broad inwardly oblique transverse band from costa just beyond fold to above vein 1b beyond middle of wing, somewhat suffused above; this band with an angulate subcostal projection posteriorly, in middle of disc including a longitudinal dark brown patch, lower extremity of band well-defined, rounded; a less oblique, narrow, somewhat suffused transverse fascia about halfway between preceding band and termen, straight,

connected in middle by a horizontal branch with preceding band; this fascia also connected by an irrorated branch above middle with apex, on costa forming a well-defined elongate dark fuscous spot; this spot preceded by another similar spot and followed by a larger quadrate spot in apex; these costal marks separated by pairs of ill-defined whitish transverse strigulae; lower half of termen and tornus with a narrow marginal suffused brown line. Cilia light greenish, with a darker greenish antemedian shade, and a paler basal line. Hind wing with veins 6 and 7 soldered towards base; rather dark bronze-greyish, cilia concolorous, paler towards tips.

Unens with upper edge incised ventrally. Socius with pointed top. Gnathos strong, an X-shaped body with broad lower and curved upper projections. Valva rather narrow, sinuate, constricted beyond middle; cucullus transversely dilated, with three marginal dentations below; sacculus under  $\frac{1}{2}$ , apical projection moderate, triangular (Slide No. 781 D, holotype).

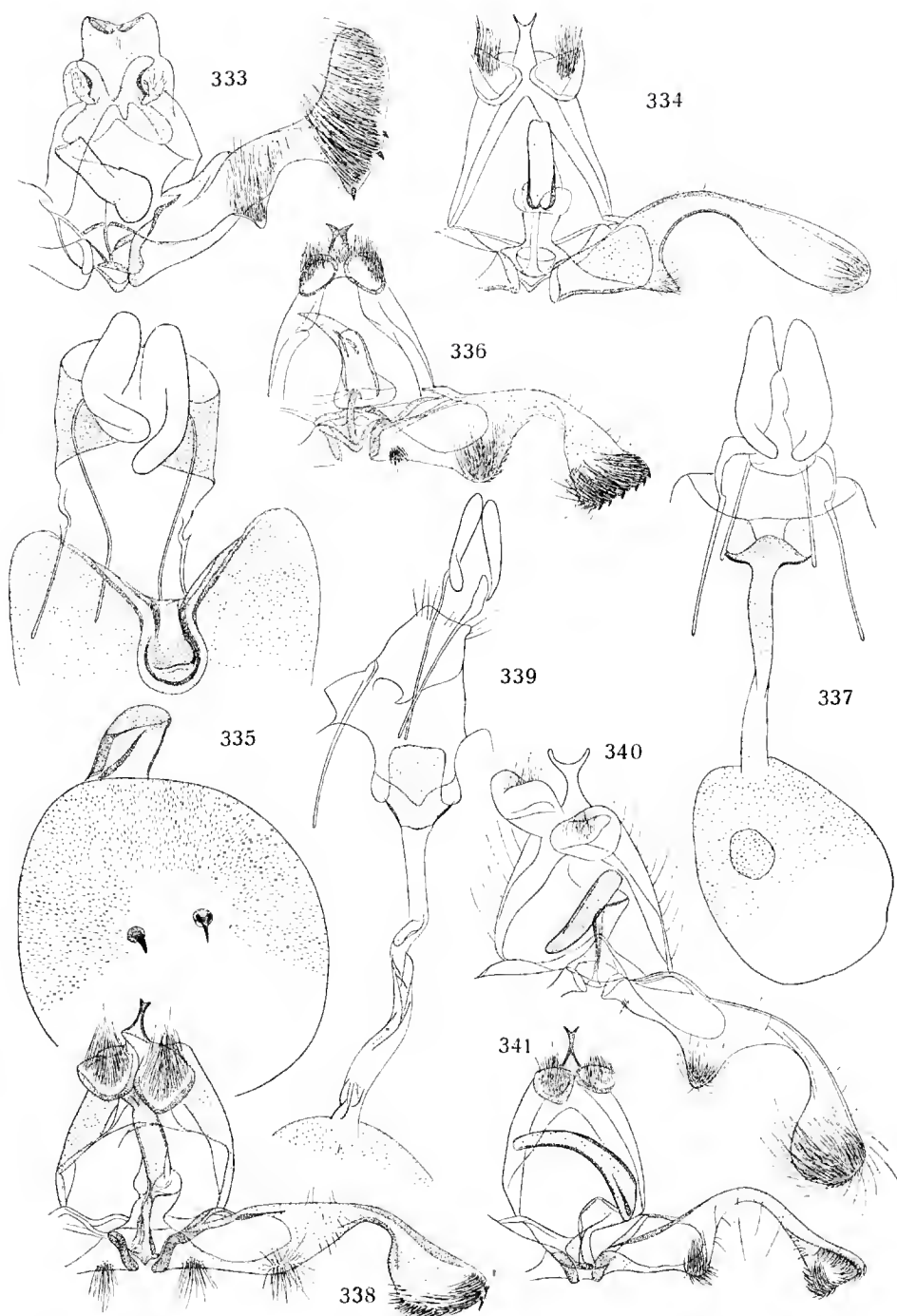
Lake Habbema, 3250–3300 m, end July—end August, 1938 (holotype). Top Camp, 2100 m, January 25, 1939. Two males, rather worn. Closely allied to preceding.

***Peridaedala archaea* spec. nov. (fig. 329)**

*ἀρχαῖος* = old

♀ 16 mm. Head, scape of antenna and palpus pale yellowish-whitish, the latter with basal segment and anterior half of median segment irrorated with brown, terminal segment greyish; flagellum of antenna dark fuscous. Thorax whitish suffused with very pale ochreous-brownish. Abdomen ochreous-whitish, touched with pink anteriorly, posterior halves of segments suffused with grey above, anal segment grey. Legs pale ochreous, anterior tibia and tarsus dark fuscous, pale ringed. Fore wing elongate-subovate, rather pointed, costa gradually gently curved throughout, apex subacute, termen moderately sinuate, oblique. Ochreous-whitish, base suffused with olive-greenish, middle of wing suffused with greenish-grey touched with bluish, disc before termen suffused with pale fulvous; markings dark brown tinged olive. Anterior half of costa narrowly suffused with greenish-grey, becoming darker anteriorly, with some two small dark brown marks beyond base; a rounded dot above dorsum beyond base; indication of an outwardly convex transverse fascia at  $\frac{1}{4}$ , formed by a small mark on costa, bifid below, by some irroration and a greenish-grey suffusion in disc and by a conspicuous triangular, slightly inwardly oblique dark brown spot on dorsum beyond  $\frac{1}{4}$ , reaching to fold; another such spot on dorsum before tornus with anterior edge inwardly oblique, posterior edge vertical; a moderate dark brown subquadrate mark on costa before middle, produced below into a thick excurved longitudinal patch in disc below costa not reaching  $\frac{2}{3}$  of wing, dark brown, suffused with deep olive posteriorly, with upper edge excavate; a less distinct smaller invert elongate-triangular spot in fold below preceding patch,





Genitalia of Eucosminae. Fig. 333: *Peridaedala prasina* spec. nov., male. Fig. 334: *Hermenias niphobola* spec. nov., male. Fig. 335: *Peridaedala crastidochroa* spec. nov., female. Fig. 336: *Hermenias conglomerata* spec. nov., male. Fig. 337: *H. scoliomelas* spec. nov., female. Fig. 338: *idem*, male. Fig. 339: *H. eugena* spec. nov., female. Fig. 340: *H. saxicolor* spec. nov., male. Fig. 341: *H. mrodelta* spec. nov., male.



more olive, less brown; both these spots preceded by bluish-olive-grey suffusion mentioned above; disc beyond preceding marks and from below costa to top of pretornal mark suffused with pale fulvous; posterior half of costa suffused with olive turning brownish towards apex, with a row of five elongate dark brown marks alternating with minute dark dots and becoming larger and paler towards apex, last mark in apex; a greyish-olive suffusion in and before apex, mixed with brownish below, forming a cloudy preterminal band to tornus, narrowed downward; this band light fulvous, posteriorly suffusedly edged with olive-grey; middle of termen with a row of four marginal semioval small dots, narrowly edged with whitish posteriorly; a short dark brown marginal strigula in apex. Cilia whitish, tinged olive, along costa dark brown opposite dark costal markings. Hind wing light brownish, anterior third becoming whitish; cilia paler, greyish with a light basal line.

Ostium, a moderate funnel; limen forming sclerotized ventral wall of the latter, with lower edge thickened. Ductus bursae short, cestum strong, being a plicate tube, with lower edge deeply emarginate ventrally and dorsally. Bursa copulatrix moderate. Signa large, nail-shaped, surface finely corrugated (Slide No. 783 D, type).

Letter Box Camp, 3600 m, November 12, 1938. One specimen. Approaching the *Acroclita* type of markings and therefore possibly an early form.

### **Hermenias MEYRICK, 1911 (fig. 342)**

*Hermenias* MEYRICK, 1911, Proc. Linn. Soc. N.S. Wales, vol. 36, p. 225. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 107, 1929.

Head with dense, rough, little appressed scales. Ocellus posterior. Proboscis rather weak. Antenna with scape considerably elongate, flagellum in male slightly flattened, serrulate and minutely fasciculate-ciliate beneath, smoothly scaled above, basal part straight, somewhat thickened, compressed and dilated beyond base or at  $\frac{1}{4}$ , with a shallow notch on dilatation above, flagellum rather slender from beyond this notch to apex; in female flagellum normal, minutely pubescent below. Palpus moderate, moderately long or long, mostly gradually curved downward, subascending or ascending; median segment thickened with dense scales, mostly smoothly appressed, sometimes roughish along edges in male, more or less roughish at apex, slightly tapering towards extremities, apex subtruncate; terminal segment slender, of varying length: from rather short to under  $\frac{1}{2}$ , continuing the curve of median segment downward, especially in female. Thorax without crest. Fore wing with costal fold in male which is mostly strong and concealing long, dense white hairs; seldom wing without costal fold; without raised scale-tufts; 1b moderately furcate at base, 2 from  $\frac{2}{3}$ — $\frac{3}{5}$  of lower edge of cell, 3 from angle, 4 approximated at base, 5 from close to 4, slightly sinuate posteriorly, 6—7 subparallel, 7 and 8 stalked from angle, 7 apparently out of vein 8 at  $\frac{1}{3}$ , to termen, 9 parallel

and approximated to 8, 10 remote, but nearer to 9, 11 from middle of cell. Hind wing with cubital pecten, 2 from slightly beyond middle of lower edge of cell, 3 and 4 stalked from angle, sometimes stalk very long, 5 closely approximated, 6 and 7 closely approximated towards base or stalked.

Tegumen broad, short, subconical. Uncus small, represented either by a slender bifid projection or by two curved horns. Socius, a large, thickened, rounded pad, densely covered with rising bristles. Transtilla absent. Valva

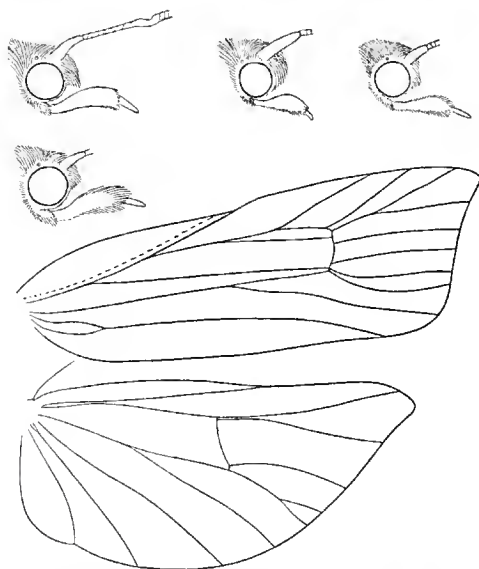


Fig. 342: *Hermenias corticina* spec. nov., left: head male (above) female (below); middle: *H. scolimelas* spec. nov., head male; right: head female; below: wing venuration male.

narrow, strongly constricted in middle, cucullus curved downward, semioval, truncate or asymmetrical, bristled, dentate along edge. Anellus very strong, erect. Aedoeagus mostly moderate, curved, hinged to apex of anellus.

Limen: a broad median plate of varying shape, forming a good characteristic for discrimination of species. Ductus bursae moderate. Signum represented by more or less developed pieces of chitine, plicate longitudinally. Bursa copulatrix large, spheroid, clothed with fine needles. Signa absent.

Typus generis *Hermenias epidola* MEYRICK, 1911 (Southeast Australia).

A rather varying genus comprising, as one extreme, species of moderate size, rougher and shorter palpi and typical Eucosmine facies, and as the other extreme, large narrow-winged species with long, rather smooth palpi and peculiar appearance, reminding of the *Carposinidae*. Both these groups, however, are connected by intermediate forms and come not in consideration for generic separation. We include in this genus also one

species (*niphobola* spec. nov.) with identical neurulation and with genitalia of the same type, but without costal fold in male. Some of the Indian species have the male antenna notched beyond base, and not at  $\frac{1}{4}$  as in all the following species from New Guinea. In our opinion this difference is not sufficient for the separation of the last named species from *Hermenias*; the costal fold is a secondary sexual character and is little reliable, as this group of characters usually is subject to considerable variation.

The following species belongs also to this genus: *Spilonota asbolandra* MEYRICK 1938 (*Trans. Ent. Soc. Lond.*, vol. 87, pp. 509—510) from Papua. Besides, one more species from Papua, four species from Australia and three from Ceylon have been described before.

#### Key to the Papuan species of *Hermenias*

1. Evenly grey, finely speckled with fuscous, an indication of a fuscous spot above tornus . . . . . *tristis* spec. nov.  
Not thus . . . . . 2
2. Dark bronze-fuscous, scattered throughout with irregular white spots. Small species without costal fold in male . . . . . *niphobola* spec. nov.  
Not thus . . . . . 3
3. Dark grey, a few white dots along costa posteriorly, a wedge-shaped transverse vertical black streak before apex from costa to termen above tornus . . .  
. . . . . *terminata* spec. nov.  
Not thus . . . . . 4
4. Grey, irrorated with white and dark fuscous, a fuscous spot above dorsum before tornus . . . . . *saxicolor*, spec. nov.  
Not thus . . . . . 5
5. Ground colour black, or dark bronze-fuscous mixed with black, markings white<sup>1)</sup> . . . . . 6  
Ground colour light brownish, pale ochreous or whitish, retinate, irrorated or suffused with fuscous, brownish or dark grey, markings dark brown or black . . . . . 10
6. A white dorsal streak, sometimes interrupted, terminating in parallel, inwardly oblique, transverse white streaks, more or less interrupted, anterior streak short, posterior streak to costa . . . . . 7  
White markings not thus . . . . . 9
7. Dorsal streak not interrupted, anterior transverse mark to below middle of wing . . . . . 8  
Dorsal streak narrowly interrupted, anterior transverse mark to above middle of wing . . . . . *psimythographa* spec. nov.
8. Ground colour black; posterior transverse white streak to below costa, almost interrupted above middle of disc . . . . . *angulata* spec. nov.  
Ground colour deep fuscous-bronze, mixed with black; posterior transverse white streak to middle of disc, top surmounted by a round white dot . .  
. . . . . *merodelta* spec. nov.
9. A bidentate mark on anterior half of dorsum, a tornal and a subapical costal spot . . . . . *zygodelta* MEYRICK  
A strongly zig-zag streak on lower half of wing from base to tornus, sometimes dissolved in basal irregular mark, a streak from middle of dorsum to costa before apex and a curved pretornal mark . . . . . *scoliomelas* spec. nov.

<sup>1)</sup> Bronze-fuscous, markings blackish-fuscous, head and a broad costal fold fuscous-grey . . . . . *asbolandra* MEYRICK

10. A complete inwardly oblique dark brown median fascia . . . . . 11  
No transverse fascia. . . . . 13
11. Transverse fascia moderately broad, gradually dilated below, sometimes suffused and connected by a branch with apex . . . *dendrosema* spec. nov.  
Transverse fascia narrow, neither branched, nor dilated below . . . . . 12
12. An oblique moderate mark on dorsum before tornus, no dot in disc before apex. . . . . *gracilis* spec. nov.  
This mark reduced to a minute transverse line; a small dot in disc before apex . . . . . *pollostes* spec. nov.
13. A black transverse, either oblique or vertical mark; before or in apex or before termen below apex . . . . . 14  
No such mark . . . . . 16
14. Preapical mark angulate, vertical. . . . . *eugena* spec. nov.  
Preapical or subapical mark inwardly oblique or longitudinal. . . . . 15
15. Upper half of wing suffused with dark grey, which colour obscures discal and dorsal black markings and connects them with costa *conglomerata* spec. nov.  
Upper half of wing slightly irrorated with grey in middle, black dorsal and discal markings well-defined . . . . . *dirupta* spec. nov.
16. Dorsum with a whitish-orange streak from base to apex, strongly serrate and edged with black above . . . . . *serrula* spec. nov.  
Dorsum without such streak . . . . . 17
17. Suffused with ochreous (male) or with light brown (female), without dark markings . . . . . *xylogena* spec. nov.  
Not thus suffused, discal and/or dorsal markings distinct . . . . . 18
18. A moderate, wedge-shaped, inwardly oblique, dark brown mark with point on  $\frac{1}{3}$  of dorsum, and an ill-defined dark brown dot above dorsum before tornus . . . . . *platysphena* spec. nov.  
Markings not thus . . . . . 19
19. A longitudinal discal streak or spot, preceded and followed by an inwardly oblique transverse mark . . . . . 20  
That streak suffused, in male indefinite, followed by a round dot, sometimes preceded by another smaller dot . . . . . *corticina* spec. nov.
20. Discal streak rather slender, well-defined . . . . . *textrix* spec. nov.  
Discal streak thickened, diffuse above, connected with costa by fuscous suffusion . . . . . (a new species from Papua, to be described)

***Hermenias niphobola* spec. nov. (fig. 334)**

*νιφόβολος* = covered with snow

♂ 11 mm. Head and thorax dark bronze-fuscous spotted with white. Antenna with scape elongate, blackish-fuscous, with a white basal ring; flagellum blackish-fuscous to notch, grey ringed with dark fuscous beyond this, notch with a white dot above. Palpus blackish-fuscous. Abdomen greyish-fuscous, paler towards base. Legs blackish-fuscous, white ringed. Fore wing elongate, costa moderately curved, apex obtuse, termen straight, oblique. Dark bronze-fuscous, irregularly spotted with white. Costa with a row of moderate transverse marks, two last marks quadrate; larger irregular spots: below costa at  $\frac{1}{2}$  and at  $\frac{4}{5}$ , interconnected by numerous small subcostal dots reaching almost to base; a row of spots just above fold: two small subbasal spots, an erect transverse spot before  $\frac{1}{4}$ , two small spots above one another beyond this, a larger irregularly-elongate spot in middle, a still larger, oblique, S-shaped spot at  $\frac{2}{3}$ , and

two round moderate spots in tornus, upper of these largest; dorsum below fold with about two rows of small unequal dots; a marginal series of dots along dorsum, in tornus and along termen, the latter interconnected towards tornus. Cilia dark fuscous, paler in tornus, basal half with a row of irregular white spots. Hind wing dark fuscous-grey; cilia grey with a dark grey antemedian shade.

Uncus elongate, with two narrow points. Socius a voluminous pad, haired above. Valva strongly narrowed in middle, lower edge deeply concave, cucullus elongate-ovate, sacculus acutely projecting. Aedoeagus moderate (Slide No. 829 D, type).

Sigi Camp, 1500 m, February 17, 1939. One specimen.

***Hermenias terminata* spec. nov.**

♀ 11 mm. Head grey, tips of scales on vertex whitish. Palpus black, basal half light fuscous mixed with whitish. Antenna black, finely white-ringed. Thorax dark fuscous, anteriorly suffused with black, posteriorly mixed with white. (Abdomen missing.) Legs fuscous-grey, anterior and median tibia and tarsus suffused with black above, white-ringed. Fore wing elongate, not dilated, costa moderately curved anteriorly, hardly curved posteriorly, apex pointed, termen straight, considerably oblique. Pale whitish-fuscous, densely suffused with rather dark fuscous, irrorated with white and pale grey, markings fuscous-black. A small oblique ill-defined transverse streak just before  $\frac{1}{4}$  of costa halfway towards cell; an ill-defined, moderate vertical blotch on dorsum beyond base to above fold; an ill-defined elongate patch of somewhat darker fuscous-greyish suffusion irrorated with whitish along middle third of upper half of wing, edges broadly suffused with fuscous-black; lower edge of patch connected anteriorly by an inwardly oblique suffused streak with  $\frac{1}{3}$  of dorsum, posteriorly connected by a vertical black blotch, which is somewhat narrowed above and well-defined, with dorsum beyond  $\frac{3}{4}$ ; a narrow transverse vertical patch from costa before  $\frac{5}{6}$  to termen just below middle and along this to tornus, outwardly curved, narrowed towards costal edge, more narrowed along termen, anterior edge with a blunt projection; a black spot in apex; posterior  $\frac{2}{5}$  of costa with a row of snow-white, somewhat suffused dots becoming larger towards apex. Cilia grey, suffused with blackish except in tornus, basal half with a row of suffused triangular white dots. Hind wing greyish-fuscous, paler towards base, suffused with darker fuscous in apex and along termen; cilia fuscous-greyish, a darker antemedian shade.

Letter Box Camp, 3800 m, September 1, 1938. One specimen.

***Hermenias saxicolor* spec. nov. (fig. 340)**

♂ 16 mm. Head and thorax light grey, scales dark grey towards base, thorax slightly edged with black. Antenna dark grey. Palpus strongly dilated: dark grey, median segment finely irrorated with whitish at base



and across middle. Abdomen dark fuscous-grey, genital segment light grey. Legs dark grey, tarsi pale-ringed. Fore wing elongate, dilated, broadest at  $\frac{3}{4}$ , with a narrow fold to  $\frac{1}{3}$ ; costa little curved, slightly bent and prominent at  $\frac{3}{4}$ , apex rounded, projecting, termen concave, little oblique above, oblique, rounded beneath. Light grey, transversely strigulated and marked with dark fuscous. Costa and costal fold finely transversely strigulated; a row of moderate dark grey dots along median part of costa, first dot subquadrate, before  $\frac{1}{3}$ ; last dot larger, triangular, beyond  $\frac{2}{3}$ , followed by a series of moderate transverse strigulae; an elongate moderate blackish-fuscous spot on costa just before apex; anterior half of disc with a row of coarse transverse marks from just above fold: a longitudinal row of three small wedge-shaped transverse marks below fold at  $\frac{1}{4}$ ; a moderate longitudinal streak along upper half of cell in middle of wing, connected anteriorly with costa before middle by an oblique strigula; an erect-semioval, somewhat inwardly oblique dark fuscous spot above dorsum before tornus, with rounded top to middle of disc well beyond cell, base of spot truncate by fold; an erect-triangular spot beyond preceding spot, in middle of disc, with anterior edge concave, upper edge horizontal, posterior edge parallel to termen; lower extremity of this spot connected by an ill-defined transverse streak of fuscous suffusion with tornus; fine dark fuscous transverse undulate strigulae connecting the two above mentioned spots with each other and with costa; subapical costal dot with a blackish line from middle of lower edge oblique to termen below apex, thence marginal to its middle, lower half of termen with some three short black vertical strigulae; dorsum and tornus with a row of transverse dark fuscous marks. Cilia fuscous-greyish, tips of scales white, basal third whitish-grey, finely barred with black, cilia around apex black. Hind wing rather dark greyish-fuscous, with bronze gloss, dark fuscous towards apex; cilia grey tinged fuscous, a dark fuscous antemedian line.

Uncus, a broad furca. Socius large, a thick, sparsely bristled pad. Transtilla narrow. Valva narrow, constricted beyond middle, cucullus rounded, sacculus with a large distal conical projection. Aedoeagus sclerotized (Slide No. 815 D, holotype).

Lake Habbema, 2600–2800 m, August 18, 1938 (holotype), August 26, 1938. Two specimens.

***Hermenias scoliomelas* spec. nov. (figs. 337, 338, 342)**

*σκολιός* = oblique, *μέλας* = black

♂ 18–19 mm, ♀ 21 mm. Head white, in male face above and side tufts laterally mixed with black. Antenna black, scape in male mixed with white. Palpus black, upper narrow edge and inner side except base white, terminal segment with a white tip. Thorax black, a broad, angulate transverse median white band with top directed rostrad, in male slightly mixed with black. Abdomen in male blackish, becoming dark grey towards apex above, anal segment with whitish posterior edge, in female fuscous-

grey, towards base and on apical tuft paler. Legs black, in female white-ringed, posterior femur and tibia dark grey, paler in female; anterior coxa white. Fore wing elongate-subtruncate, narrow, dilated, costal fold in male thickened, moderate, to  $\frac{1}{3}$ , costa slightly curved along fold, straight posteriorly; costa in female slightly curved at base, straight posteriorly, slightly prominent beyond  $\frac{3}{4}$ ; apex rather pointed, termen gently sinuate, rather oblique. Black, markings white. In male a strongly meandering rather narrow streak on lower half of wing from base to termen, at base strongly convex and reaching above fold, enclosing a semicircular or subtriangular spot of ground colour on dorsum beyond base, touching dorsal edge anteriorly; this spot dilated dorsad, its upper edge with a semicircular excavation; spot along dorsum reaching from about  $\frac{1}{5}$  to beyond middle, including a semioval black marginal spot on  $\frac{1}{3}$  of dorsum which is sometimes larger, triangular and interrupts the white streak; this streak rather angularly bent upward beyond middle of wing and reaching slightly above middle of disc, thence rather straight to dorsum before tornus; this streak narrowly interrupted before dorsum, once more curved upward in tornus and running parallel to lower half of termen as far as its middle, leaving a narrow terminal line of ground colour; a subtriangular slightly outwardly oblique moderate spot at  $\frac{1}{3}$  of disc above middle; a slightly sinuate very oblique streak from beyond upper angle of cell to costa before apex, suffused above, connected with costa anteriorly by an outwardly oblique streak of white irroration; this streak also connected with costa beyond middle by a less oblique short suffused white branch; scattered white scales on lower half of costal fold, except towards base and in disc below posterior half of fold. In female costa with pairs of white transverse marks, becoming minute beyond middle; basal patch white, along costa suffused with blackish to beyond one fourth except on the above mentioned pairs of transverse marks, posterior edge of basal patch with strong acute projection in middle, serrate above dorsum; a strongly curved black mark from dorsum beyond base to fold, thence along fold almost to posterior edge of basal patch, base of mark triangularly dilated on dorsum; a meandering, irregular white fascia from dorsum before middle to costa before apex, bifid on costa, with upper edge slightly suffused, concave along its upper  $\frac{2}{3}$ ; lower edge of fascia well-defined, with a pair of rounded projections below middle, deeper excavate above and especially below those projections, also including a black point below its middle; an angulate white mark along dorsum before tornus, in tornus and before lower half of termen corresponding with posterior part of white fascia in male; disc below costa slightly scattered with whitish scales, indistinctly connecting a pair of whitish costal marks at  $\frac{3}{4}$  with upper part of transverse fascia; a white dot before termen above middle. Cilia black with a cloudy whitish median band and a few scattered white scales. Hind wing grey, in male posterior half suffused with dark fuscous-grey; cilia light grey, basal half grey-fuscous.

Uneus narrow, short-bifid. Socius large. Valva constricted in middle; cucullus semiovalate, with two marginal teeth below its top, saeculus very blunt. Aedoeagus rather long, little curved, top constricted (Slide No. 770 D, holotype).

Limen with a broad emargination, an elongate, arrow-head-shaped plate below this, with obtuse top, concave towards sides. No cestum. Bursa copulatrix with a weak round slightly scobinate plate (Slide No. 771 D, allotype).

Lake Habbema, 3250–3300 m, August 26, 1938 (holotype, male), August 3, 1938 (allotype, female), August 6–18, 1938. Three males, one female. Allied to *H. zygodelta* MEYRICK.

**Hermenias merodelta** spec. nov. (figs. 341, 345)

$\mu\epsilon\rho\omicron\varsigma$  = mark,  $\delta\epsilon\lambda\tau\alpha$  = letter delta

♂ 14.5 mm, ♀ 16 mm. Head white, sides of face and vertex black. Antenna in male with scape and basal fourth as far as notch black, posteriorly dark grey, in female black, scape black, white above. Palpus black, upper edge and inner side of median segment except base white. Thorax grey mixed with white and black, edged with white (damaged). Abdomen grey; sides with long light grey scales in female. Legs dark grey, anterior and median tibia and all tarsi black, white-ringed. Fore wing in male with a moderate fold to  $\frac{1}{3}$ , costa gradually moderately curved throughout, more so anteriorly, less curved in male; apex subobtusate, termen straight; in female termen moderately oblique, more oblique in male. Deep glossy fuscous-bronze, subcostal area from base to apex with violet gloss, markings black and white. Costa with eight pairs of short narrow white strigulae, last strigula single; a white dorsal streak from well beyond base to  $\frac{3}{5}$ ; anterior extremity of this streak with a moderate rounded projection above, not reaching fold, posterior extremity continued by an inwardly oblique wedge-shaped transverse streak to middle of disc at  $\frac{2}{3}$ ; a rounded white spot between top of last mentioned streak and  $\frac{3}{4}$  of costa, slightly nearer to the former; an elongate streak of black suffusion from base of costa along fold and middle of disc, edging white marks above, separating wedge-shaped streak and round spot and extended to a black rectangular patch beyond round spot, this patch not reaching termen; a faint transverse vertical wedge-shaped streak from costa beyond middle, followed by three rounded black costal dots alternating with white costal pairs of strigulae, ultimate dot largest, in apex, touching preterminal black patch; a somewhat curved, inwardly oblique subclavate fuscous-blackish transverse patch on dorsum, edging wedge-shaped transverse streak posteriorly, reaching  $\frac{1}{3}$  across wing; this patch followed by a whitish patch in tornus to lower part of termen, strongly irrorated with bronze; a moderate dark fuscous streak along middle third of termen, penetrating into preceding, becoming very narrow above; a small triangular white dot on termen below apex edged with blackish anteriorly.

Cilia bright bronze, becoming fuscous-blackish opposite apex and on costa, a large white bar below apex; basal third along termen dark fuscous with pale grey base and short white bars, cilia opposite tornus white. Hind wing grey, darker towards apex in female, cilia paler grey with a dark grey antemedian shade.

Uncus narrow, bifid. Socius moderate. Valva strongly narrowed along central third, curved downward, cucullus triangularly truncate, without marginal teeth; saeculus rectangular. Aedoeagus long, curved (Slide No. 777 D, holotype).

Limen, a semioval plate with somewhat thickened upper rim, a triangular, less sclerotised plate at each side of this plate. Cestum, a series of short longitudinal folds. Bursa copulatrix large (Slide No. 775 D, allotype).

Top Camp, 2100 m, January 22, 1939 (holotype, male; allotype, female). Two specimens, male damaged. The markings on basal third of wing in both specimens are somewhat rubbed off and not distinct; however, this species can easily be recognised by the bronze ground colour and the polychrome cilia in fore wing. Intermediate between *H. dendrosema* spec. nov. and *H. psimythographa* spec. nov.

#### ***Hermenias angulata* spec. nov.**

♀ 15 mm. Head white, sides of face and vertex black. Palpus black, inner side and upper edge of median segment white. Thorax white, a large subquadrate spot on shoulder, a small black median spot beyond middle and a marginal spot on each side towards apex (Abdomen missing). Legs greyish, suffused with dark grey, anterior tibia and tarsus with black, light-ringed. Fore wing elongate, moderately dilated, costa moderately curved at base, less curved towards apex, straight in middle, apex obtusely pointed, termen faintly concave above, oblique. Black, markings whitish. Costa except along basal fifth with about seven pairs of coarse slightly oblique, transverse marks, each pair sometimes narrowly interconnected along costal edge; these marks becoming larger and less oblique posteriorly; base of dorsum and subcostal and terminal areas more or less mixed with whitish; a broad dorsal white streak from beyond  $\frac{3}{4}$ , abruptly narrowed anteriorly, with a broad inwardly oblique projection reaching to fold beyond  $\frac{1}{5}$  of wing, followed above fold by a short longitudinal white mark; dorsal streak emarginate beyond this projection, angularly bent upward beyond  $\frac{3}{4}$  of dorsum and forming an inwardly oblique transverse streak to below and before  $\frac{5}{6}$  of costa, which almost touches the penultimate pair of costal marks; dorsal streak gradually narrowed above, angularly incised and almost interrupted above middle of disc anteriorly; a moderate, elongate white spot in tornus, terminal area above this spot irrorated with whitish and suffused with grey stronger than any other black part of wing; anterior edge of this area well-defined, concave below, angularly projecting in middle, thence running to terminal edge below apex; a



white dot on termen below apex; dorsum sparsely dotted with black. Cilia (imperfect) dark grey, white around apex and in tornus. Hind wing light grey, becoming darker grey, slightly tinged fuscous towards apex; eilia pale grey with a dark grey basal half.

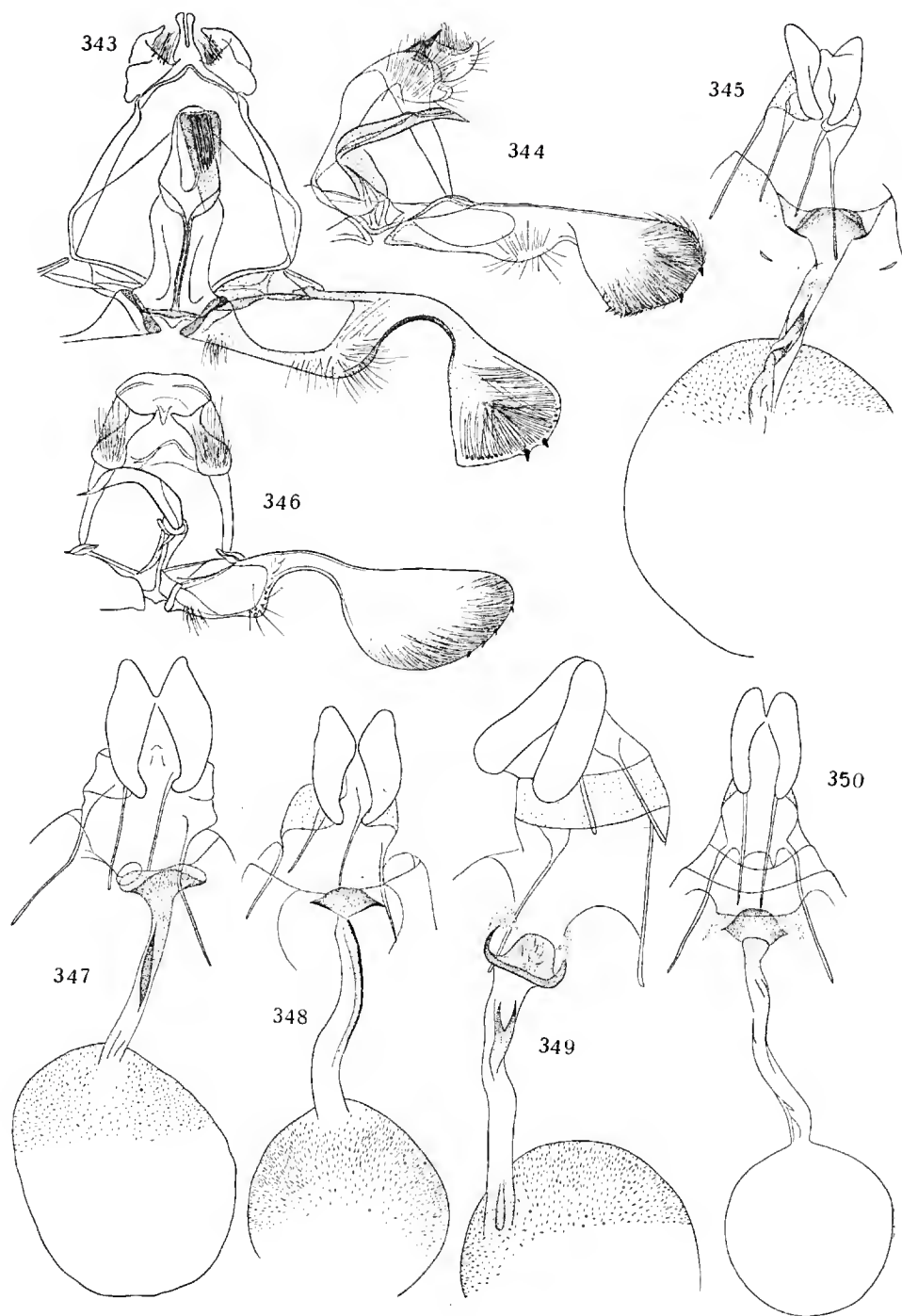
Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 13, 1938. One specimen. Closely allied to *H. merodelta* spec. nov.

***Hermenias psimythographa* spec. nov. (fig. 351)**

*ψίμυθος* = white-lead, *γράφω* = to draw

♀ 19 mm. Head white, touched with pale ochreous. Antenna dark grey black towards base, scape white, black below. Palpus somewhat roughish; black, white on inner side; median segment with upper edge white, a moderate interrupted white basal band; terminal segment white, irrorated with black laterally. Thorax white, black anteriorly, a black median transverse band; tegula with basal half black. Abdomen ochreous-grey, darker grey posteriorly, anal tuft pale ochreous, venter whitish. Legs black, posterior grey, whitish below, all legs white-ringed. Fore wing elongate, narrow, dilated, costa little curved at base, straight in middle, gradually gently curved before apex, apex rather obtuse, termen slightly rounded, faintly prominent between veins 5-6 and 2-3. Black, markings white. A small longitudinal streak from middle of base; costa with a small subquadrate mark beyond base and eight pairs of thick, truncate, short transverse marks, some dilated below and more or less confluent, and then irrorated with black, surrounded by white irroration below; a streak along dorsum from base to  $\frac{3}{5}$ , narrow along basal fifth, dilated and forming a wedge-shaped, inwardly oblique transverse streak at  $\frac{1}{4}$  reaching  $\frac{2}{3}$  across wing; top of dorsal streak with a short longitudinal streak; dorsal streak strongly narrowed or interrupted beyond origin of transverse streak, broader interrupted on middle of dorsum, forming a semioval spot before middle and a short mark beyond middle; this mark produced posteriorly so as to form an inwardly oblique transverse fascia, touching penultimate pair of costal marks, broadly interrupted above middle of disc, slightly narrowed towards costa; an irregular vertical wedge-shaped spot in tornus, with top to middle of wing, preceded and followed by irroration of white scales; base of spot continued along lower third of termen by a white streak, strongly dentate anteriorly; a vertical moderate streak of dark leaden-metallic scales along middle of wedge-shaped tornal spot and a somewhat narrowed fascia of leaden-metallic scales with bluish reflections before upper  $\frac{2}{3}$  of termen running to below apex, parallel to termen; in right wing three small triangular black marginal spots on white dorsal markings and two small dots in tornus. Cilia white with a large cloudy blackish suffusion opposite termen above middle and a smaller suffusion on dorsum; costal eilia black, streaked with white opposite white costal marks. Hind wing light grey becoming dark grey,





Genitalia of Eucosminae. Fig. 343: *Hermenias tristis* spec. nov., male. Fig. 344: *Bathrotoma angelica* spec. nov., male. Fig. 345: *Hermenias merodelta* spec. nov., female. Fig. 346: *Allohermenias subpetraea* spec. nov., male. Fig. 347: *Hermenias dendrosema* spec. nov., female. Fig. 348: *H. conglomerata* spec. nov., female. Fig. 349: *H. tatrix* spec. nov., female. Fig. 350: *H. serrula* spec. nov., female.

tinged fuscous towards apex and less distinctly tinged fuscous along termen; cilia whitish with a cloudy dark grey basal half.

Limen with thickened upper edge, in middle emarginate: laterally more sclerotized than in middle. Cestum, two small sclerotizations towards bursa (Slide No. 772 D, type).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 17, 1938. One specimen. Allied to preceding.

***Hermenias dirupta* spec. nov. (fig. 353)**

♀ 19 mm. Head white, sides suffused with blackish. Antenna brownish-black, scape white, blackish below. Palpus white, basal segment and an oblique broad median transverse band of median segment black; this segment also with a dark fuscous subapical transverse band less oblique, connected below with transverse band; terminal segment irrorated with dark fuscous-grey. Thorax white, slightly irrorated in middle with blackish, basal half of tegula black, mixed with brown posteriorly. Abdomen pale ochreous, apex slightly suffused with grey. Legs pale greyish-ochreous, anterior and median tibia and tarsus blackish, white-ringed. Fore wing elongate, rather narrow, moderately dilated, costa hardly curved, slightly bent at  $\frac{4}{5}$ , apex subobtuse, termen straight, little oblique, rounded beneath. White, moderately speckled with black and grey along costal third, with light brown elsewhere, tending to form transverse strigulae and a thin retination posteriorly. Markings black with dark brown tinge. Costal edge black anteriorly; costa transversely strigulated with black, a small transverse black mark beyond  $\frac{1}{4}$ , clavate below; a round dot on middle of costa and three smaller round dots along posterior fourth of costa to before apex; a denser blackish irroration along and below third fourth of costa forming more distinct transverse strigulation; a wedge-shaped, inwardly oblique transverse streak on dorsum beyond base reaching to above fold; an elongate longitudinal, somewhat inwardly oblique patch below middle of disc along about second fourth of wing; anterior edge of this patch truncate, upper edge with a small median projection; posterior edge of patch inwardly oblique, thus upper angle acutely projecting; lower edge of patch with a narrow stalk from middle to  $\frac{2}{5}$  of dorsum; a subtriangular slightly inwardly oblique spot on dorsum before tornus, with top truncate, not reaching middle of disc; anterior edge of this spot somewhat undulate, oblique, posterior edge straight, hardly inwardly oblique; a moderate streak from disc above middle at  $\frac{4}{5}$  of wing length to apex, anterior half dilated to a subquadrate patch, with upper edge bent, lower edge of patch with two slightly curved vertical streaks; anterior streak brown, narrowed below, to tornus, posterior streak black, narrow, to termen below middle; a narrow black line from lower edge of patch to termen below apex and along upper  $\frac{3}{4}$  of termen. Cilia white, slightly mixed with black and irregularly barred with grey; basal

half with some longitudinal streaks opposite middle of termen, in left wing confluent and forming a blackish patch. Hind wing pale glossy grey, darker fuscous towards apex, paler towards dorsum. Cilia pale grey, basal third fuscous.

Limen a rounded-trapezoid plate, with upper edge slightly concave, sides with small angulations. Cestum, a series of irregular folds from below ostium to bursa copulatrix (Slide No. 773 D, type).

Lake Habbema, 3250–3300 m, August 20, 1938. One specimen. Allied to preceding species.

***Hermenias conglomerata* spec. nov. (figs. 336, 348)**

♂ 14 mm, ♀ 17–18 mm. Head in male whitish suffused with dark grey; in female head ochreous-whitish. Antenna dark grey. Palpus in male greyish, median segment suffused with dark grey towards apex, terminal segment dark grey; palpus in female blackish, median segment with a pale median transverse band, terminal segment white. Thorax white, slightly mixed with black, anterior fourth and apex black. Abdomen in male black, in female whitish. Legs whitish, anterior and median tibia and tarsus black, white-ringed. Fore wing narrow, elongate, gradually moderately dilated, more so in male; costa little curved anteriorly, posterior third more curved; male with a moderate thickened fold to  $\frac{1}{3}$ , concealing very short white scales; costa in female gently curved throughout; apex pointed, termen straight, oblique, more so in female. White, partially faintly irrorated or suffused with pale tawny, more so in male, markings black and dark fuscous. Male. Base of wing suffused with black except on dorsum, this suffusion paler towards base, edge outwardly oblique; a large subtrapezoid black patch on upper half of wing before middle, with anterior edge inwardly oblique, continued by a transverse moderate fascia to above  $\frac{1}{3}$  of dorsum, gradually narrowed below; posterior edge of this patch concave, lower angle produced into a longitudinal blotch in cell, which is considerably irrorated with pale tawny; costa posteriorly with three elongate black marks becoming smaller towards apex; first mark connected with preceding costal patch by tawny-fuscous suffusion along and below costa; two rather large dentiform black patches: on dorsum before tornus and on termen somewhat above middle, respectively; tops of these patches curved and coalescent in middle of disc well beyond cell, their bases extended along edge of wing so as to form a marginal black streak along posterior part of dorsum, in tornus and along termen to apex, dilated in apex so as to form an apical black spot; dorsum irregularly transversely strigulated with black. Cilia blackish, base white, a black interrupted antemedian fascia. Female. A transverse black blotch on costa beyond base, triangularly projecting below fold and almost touching dorsum beyond base; posterior angle of this blotch narrowly extended along fold and merging into an erect-ovate, strongly inwardly oblique

black patch at  $\frac{2}{5}$  of disc; lower edge of this black patch gradually rounded, reaching to above dorsum, upper edge of patch truncate, horizontal, to middle of wing, connected anteriorly by a moderate transverse fuscous-blackish blotch with costa beyond  $\frac{1}{4}$ , connected posteriorly with lower anterior angle of a subquadrate transverse black patch on middle of costa; this black patch with posterior edge concave, with lower angle acutely projecting posteriorly and pointing towards tornus; an elongate longitudinal dark fuscous patch adjacent to lower edge of preceding and connecting this with a triangular black spot occupying less than fourth fifth of dorsum; anterior edge of the last mentioned spot vertical, posterior edge considerably oblique, connected below with a strongly inwardly oblique erect-ovate moderate black spot reaching above to middle of disc halfway between cell and termen: an elongate horizontal black patch before upper half of termen, narrowed and turned upward posteriorly, running into apex, below connected with a broad blackish suffusion along termen and in tornus, which is slightly mixed with white; costa between middle and apex with three subtriangular black dots, first dot connected below with the subterminal black patch; costa between black markings transversely strigulated with fuscous-blackish; upper half of wing as far as vein 9 suffused and irrorated with dark bronze-fuscous; dorsal edge irregularly dotted with blackish. Cilia whitish, tips suffused with grey except around tornus and dorsum; a strongly interrupted black ante-median line. Hind wing in male rather dark greyish-bronze-fuscous, in female pale grey suffused with light bronze-fuscous; cilia concolorous.

Uncus moderate, bifid. Socius moderate. Valva strongly constricted in middle; cucullus triangular, truncate, with some six marginal teeth; sacculus subrectangular, top rounded, projecting. Aedocagus short, pointed (Slide No. 793 D, holotype).

Limen, an elongate-ovate plate, with acute, erect sides. Cestum, a strong verrucose ridge and a moderate band along upper  $\frac{3}{4}$  of ductus (Slide No. 794 D, allotype).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 25, 1938 (holotype, male). Lake Habbema, 3250–3300 m, August 26, 1938 (allotype, female; paratypes). One male, three females. Allied to *H. dendrosema* spec. nov.

### ***Hermenias platysphena* spec. nov.**

*πλατύς* = broad, *σφήν* = wedge

♀ 16.5 mm. Head whitish. Antenna whitish irrorated with light brown, ringed with dark fuscous. Palpus rather long, curved, median segment with a projecting tuft below, appressed against terminal segment; whitish, median segment suffused with greyish-fuscous, terminal segment with a small dark fuscous median band. Thorax whitish touched with pale ochreous, tegula light brown except tip (Abdomen missing). Legs pale



ochreous, anterior and median tibia and tarsus with broad blackish-fuscous bands. Fore wing elongate, rather narrow, moderately dilated, broadest at  $\frac{1}{5}$ , costa little curved, apex obtusely pointed, termen faintly concave above, oblique. Pale ochreous-whitish, partially coarsely irrorated with tawny-brown, this irroration tending to form isolated spots; markings dark brown, costal markings blackish-brown. Base of costal edge blackish-brown; costa with a row of rounded transverse dots alternating with minute strigulae. Tawny-brown irroration forming an elongate spot on dorsum beyond base, running from this transversely across wing to below costa, thence forming a longitudinal more or less defined streak below costa gradually converging with costa, but not reaching costal edge and becoming paler posteriorly, connected with a tawny spot in apex; a longitudinal brownish-tawny patch along third fourth of disc below middle; a rather broad fuscous-tawny terminal blotch narrowed below, preceded by a vertical tawny streak interrupted above middle by a blackish-brown spot; an inwardly oblique transverse blotch from  $\frac{1}{3}$  of dorsum to above fold, with top turning brownish-black and longitudinally extended above fold, preceded by blackish-brown irroration along fold, and tending to form an oblique transverse streak towards costa beyond base; middle of disc coarsely irrorated with blackish-fuscous, this colour slightly extended above fold posteriorly; a round blackish-fuscous spot above and before end of fold; a row of irregular small dots and marks along dorsum, denser along posterior fourth of dorsum, extended along tornus to termen; ground colour hardly obscured above dorsum posteriorly and above tornus, forming an outwardly curved transverse blotch beyond cell, parted by a minute, also curved, interrupted light tawny transverse strigula. Cilia pale fuscous, becoming sordid white towards base, suffused with greyish-fuscous opposite apex; an interrupted blackish-fuscous antemedian line around apex, reduced to two small bars opposite middle of termen; a pair of paler dots in tornus. Hind wing and cilia glossy pale ochreous-whitish.

Lake Habbema, 3250–3300 m, August 26, 1938. One specimen. Closely allied to *H. conglomerata* spec. nov.

***Hermenias dendrosema* spec. nov. (fig. 347)**

*δένδρον* = a tree, *σημα* = a mark

♀ 15–17 mm. Head whitish, face with sides and a small brush in middle above blackish, vertex with a long tuft of whitish hairs tinged brownish towards tips, covering scapes of antennae. Antenna with flagellum dark fuscous, becoming fuscous-blackish towards base, scape whitish. Palpus triangularly dilated; blackish, median segment slightly mixed with white in middle, a triangular white spot on middle of its upper edge; terminal segment whitish, partially concealed. Thorax pale ochreous-whitish, slightly suffused with light fulvous-brownish, shoulder blackish. Abdomen



pale ochreous, tinged grey, ovipositor black. Legs pale ochreous-greyish, anterior and median tibia and tarsus black, white ringed. Fore wing narrow, elongate, little dilated, broadest in middle, costa gradually gently curved anteriorly, almost straight posteriorly, apex subacute, termen almost straight, oblique. White, densely irrorated with blackish-fuscos, less so along dorsal half, and partially suffused with fuscous-brown; markings fuscous-black. Basal patch indicated by evenly scattered blackish-fuscos scales to before  $\frac{1}{4}$  of wing, with edge distinct, on lower half of wing edge followed by pure white ground colour; costa with a wedge-shaped very oblique streak at base, produced into a narrow line along fold to middle of disc; a moderate dentiform spot on  $\frac{1}{4}$  of costa, preceded and followed by some dotting; a broad transverse fascia, with upper third wedge-shaped, rather narrow, originating from costa slightly beyond middle, broadly triangularly dilated along parting vein; posteriorly this fascia forming a pointed longitudinal projection to upper angle of cell, with lower edge horizontal, thence becoming slightly inwardly oblique and gradually moderately dilated to middle of fold; from there transverse fascia becoming almost vertical, slightly narrowed to  $\frac{2}{5}$  of dorsum; anterior margin of fascia concave and suffused above fold, well-defined and straight below fold; posterior margin of fascia below above mentioned projection sinuate, well-defined, edged with a transverse streak of unobscured ground colour, which becomes narrower above, to middle of parting vein; an elongate-triangular spot in apex, anterior edge inwardly oblique, lower horizontal, both slightly suffused, acute point almost touching posterior projection of central fascia in upper angle of cell; posterior  $\frac{2}{3}$  of costal half suffused with tawny-brownish, this suffusion becoming paler and dissolved in tawny irroration anteriorly; three triangular dark dots along costa between central fascia and apical spot; a moderate wedge-shaped, inwardly oblique transverse mark on  $\frac{3}{4}$  of dorsum connected above by a striga of brownish irroration with top of apical patch; space between this and central fascia except transverse marginal white streak of that fascia, and area from parting vein to dorsum are evenly suffused with deep fuscous-tawny; a whitish dot in upper angle of cell and some whitish dotting along dorsal edge; dorsum dotted with fuscous-black; tornal area whitish, suffused with grey, less so anteriorly, terminal edge with a moderate pale fuscous streak penetrating into apical patch on termen below apex. Cilia pale ochreous with a pale fuscous antemedian shade, in apex and on dorsum dark fuscous. Hind wing rather transparent, whitish, suffused with fuscous posteriorly and becoming darker towards apex.

Limen elongate, upper edge gradually concave, two small rounded lobes laterally. Cestum, a spindle-shaped piece in middle of ductus and a pair of weak folds at its base (Slide No. 796 D, holotype).

Lake Habbema, 3250–3300 m, August 29, 1938 (holotype), August 21, 1938. Two females.

***Hermenias serrula* spec. nov. (fig. 350)**

♀ 17–18 mm. Head light ochreous-brownish, face whitish. Antenna dark fuscous. Palpus moderately long, somewhat curved; pale ochreous, basal segment and median segment except upper edge and apex more or less suffused with blackish-fuscous. Thorax anteriorly fuscous-tawny, in middle blackish-fuscous, apical fourth whitish-ochreous, tegula whitish-ochreous, basal half fuscous-tawny. Abdomen pale greyish-ochreous-whitish. Legs whitish, anterior and median tibia and tarsus blackish-fuscous, pale ringed. Fore wing elongate, rather narrow, dilated, costa curved towards extremities, straight in middle, apex moderately pointed, termen faintly rounded, oblique. Pale ochreous, dorsal third suffused with light ochreous-brown or fulvous-brown, costal two-thirds densely suffused with dark fuscous, markings fuscous-black. Anterior half of costa with a row of small blackish dots of unequal size, some of them produced across wing by short suffused transverse strigulae, largest at  $\frac{1}{4}$ ; posterior half of costa with six somewhat suffused larger subtriangular dots, ultimate dot largest, rounded, apical; a longitudinal series of fuscous-black discal markings, faintly edged below with pale ground colour; these markings shaped as follows: an erect-ovate inwardly oblique transverse spot beyond base, not reaching dorsum, extending well above fold; another similar patch larger, more inwardly oblique, traversed in middle by fold, reaching below fold halfway towards dorsal edge, sometimes upper half (above fold) obliterate; third dark marking along fold, hardly reaching above second marking, from slightly before middle of wing to before end of cell; this third marking elongate-triangular, with anterior edge vertical, upper edge horizontal, lower angle of marking halfway between fold and dorsum, posterior angle of marking continued by a moderate gradually curved semicircular streak, being concave above, encircling lower angle of cell from below, and reaching posteriorly well beyond this angle; a transverse moderate vertical blotch on end of cell, sometimes interrupted in middle; often abovementioned discal markings less definite, more or less interconnected by dark fuscous suffusion, so as to form an irregular longitudinal streak with strong serrate lower edge; dark fuscous suffusion of upper part of wing, becoming denser below middle third of costa and towards apex, becoming glossy-bronze in apex; a faint irregular sinuate streak of still darker blackish-fuscous irroration before termen, more or less connected with fuscous-blackish suffusion along termen. Cilia sordid pale ochreous, tips grey around apex; a blackish-fuscous interrupted ante-median band. Hind wing pale grey, suffused with light fuscous except towards base; cilia concolorous.

Limen, a moderate subovate plate, broader than in *H. conglomerata* spec. nov., with pointed extremities. Cestum with a few small subchitinous folds. Bursa copulatrix small (Slide No. 792 D, holotype).

Lake Habbema, 3250–3300 m, end July—end August, 1938. Five

specimens. Judging by the female genitalia closely allied to *H. gracilis* spec. nov.

***Hermenias pollostes* spec. nov.**

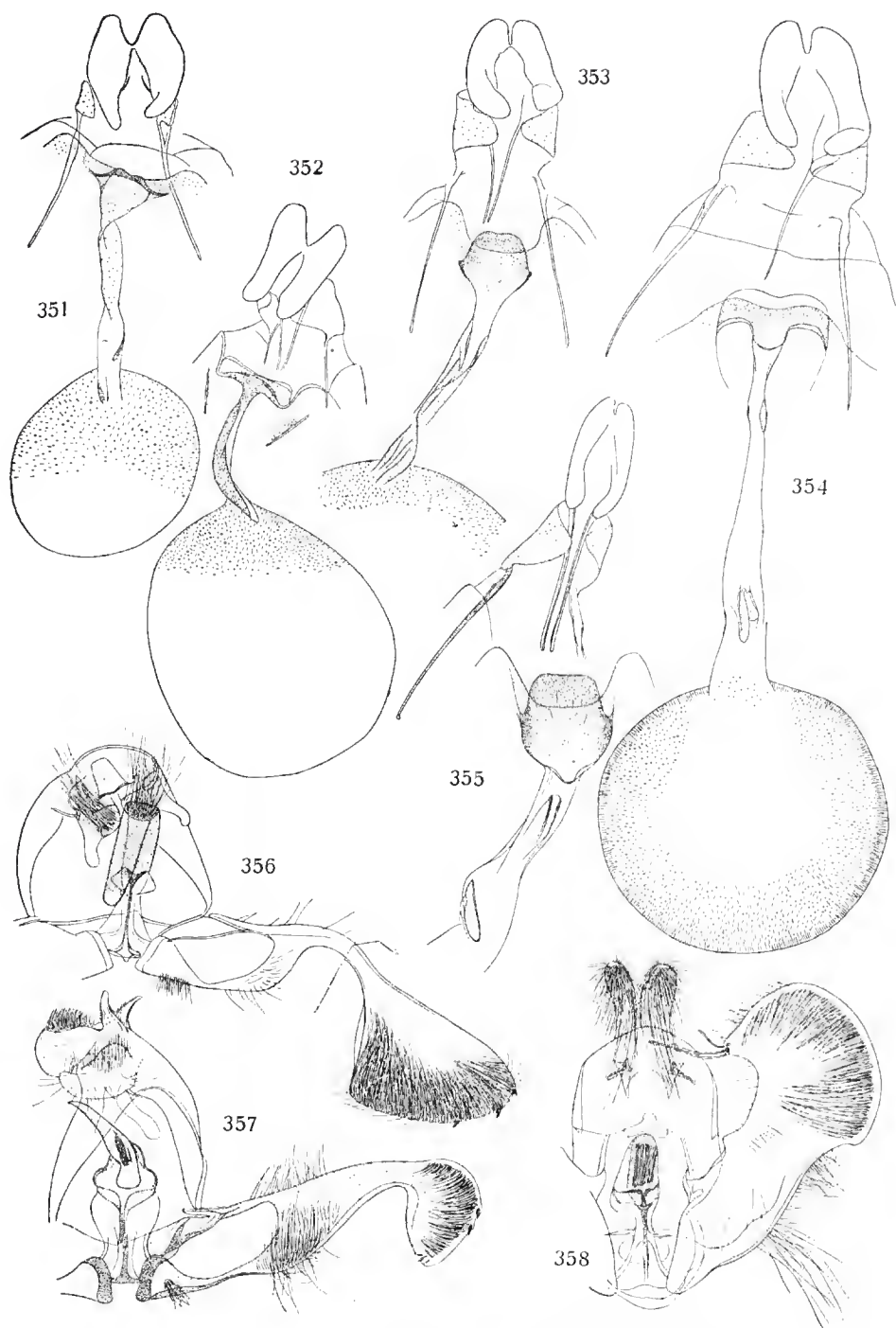
*πολλοστός* = small

♀ 13 mm. Head and thorax whitish, tegula mixed with fuscous-blackish. Antenna fuscous, darker towards base, scape whitish. Palpus whitish, median segment suffused with dark fuscous along lower half and towards apex, except apical edge (Abdomen missing). Legs whitish, anterior tibia and tarsus blackish, white-ringed. Fore wing elongate-subovate, moderately dilated, costa gently curved throughout, apex pointed, termen moderately sinuate, oblique. White, irrorated and transversely strigulated with light tawny-ochreous, markings fuscous-black. Base of costa with a narrow very oblique streak, extended along base of fold, connected with dorsal edge by two ill-defined greyish vertical striae; costa beyond this streak with a row of small dots, becoming somewhat larger and subtriangular posteriorly; these dots becoming largest and rounded in apex; a moderate oblique mark beyond  $\frac{1}{4}$  of costa, truncate below, hardly reaching upper edge of cell; a transverse fascia from middle of costa to  $\frac{2}{5}$  of dorsum, strongly narrowed in cell, upper third outwardly curved, vertical, with a projection posteriorly running along upper edge of cell; lower third of fascia tolerably straight, inwardly oblique, with anterior edge serrate above, indent just above fold; a strongly inwardly oblique, wedge-shaped, narrow slightly curved mark from  $\frac{2}{3}$  of dorsum to beyond base of vein 3; an elongate-rectangular spot before termen below apex, connected by a horizontal narrow streak of blackish irroration with  $\frac{1}{3}$  of central fascia; termen darker: finely irrorated and transversely strigulated with bronze-fuscous, this irroration connected with the apical dot. Cilia whitish, apical third pale fuscous opposite middle of termen, a narrow interrupted blackish antemedian line around apex and along upper half of termen; some small fuscous dots in tornus. Hind wing and cilia pale ochreous-whitish, glossy.

Sigi Camp, 1500 m, February 26, 1939. One specimen.

***Hermenias gracilis* spec. nov. (fig. 352)**

♀ 15–17.5 mm. Head white, sometimes touched with pale ochreous, rather rough. Antenna grey, darker towards base, scape white. Palpus roughish below, dark fuscous, upper edge of median segment and entire terminal segment white or pale ochreous-white. Thorax white or pale ochreous-white, more or less irrorated with dark fuscous, basal half of tegula dark fuscous. Abdomen pale fuscous-whitish or ochreous-whitish. Legs white, anterior tibia and tarsus black, white-ringed, median tibia and tarsus white, black banded. Fore wing narrow, elongate, dilated, costa slightly curved at base, straight beyond base, faintly impressed and appearing slightly concave at  $\frac{1}{3}$ ; posterior half of costa slightly curved; apex pointed, termen straight, oblique. White, costal half and posterior



Genitalia of Eucosminae. Fig. 351: *Hermenias psimythographa* spec. nov., female. Fig. 352: *H. gracilis* spec. nov., female. Fig. 353: *H. disrupta* spec. nov., female. Fig. 354: *H. corticina* female. Fig. 355: *H. xylogena* spec. nov., female. Fig. 356: *Allohermenias tenuitexta* spec. nov., male. Fig. 357: *Hermenias corticina* spec. nov., male. Fig. 358: *Aeroclita allodapa* spec. nov., male.



third moderately irrorated with dark fuscous-grey, irroration tending to form transverse strigulae, which become coarse towards costa: or whitish, touched with pale ochreous, irrorated with light ochreous-brown, more so posteriorly, especially along costal half; irroration on lower half tending to form transverse striae. An oblique transverse blackish spot from costa beyond base to fold; another such spot, somewhat shorter, on  $\frac{1}{4}$  of costa; a black or dark fuscous transverse fascia from middle of costa to beyond  $\frac{2}{5}$  of dorsum, rather narrow, with upper third broader, vertical, forming a blunt posterior projection just above cell; lower two-thirds of this fascia narrower, inwardly oblique, with a moderate, angulate projection above dorsum anteriorly; moderate irregular light tawny spots below middle of disc: before and beyond transverse fascia, posterior spots larger; costa between transverse fascia and apex with three blackish dots; a strongly inwardly oblique black or dark fuscous mark from  $\frac{2}{3}$  of dorsum to about  $\frac{1}{3}$  of wing breadth halfway between transverse fascia and termen: top of mark bent, pointing towards tornus: dark fuscous-grey irroration and strigulation, stronger along costal half, reaching posteriorly as far as vein 9, interrupted in disc beyond cell, distinct again towards termen where it is tinged with bronze; a dark fuscous-bronze dot in apex. Cilia white, barred with black opposite costal markings, apical third around apex and along upper half of termen dark grey, basal third except extreme base around apex and along second fourth of termen with a black line. Hind wing with veins 6 and 7 closely approximated towards base; sordid whitish, tinged pale greyish-fuscous posteriorly, more distinctly so towards apex; cilia sordid whitish, on costa before apex touched with ochreous.

Limen T-shaped, transverse bar with rounded extremities and a sclerotized median body with rounded upper edge, this part and stalk of the "T" finely corrugated. Ductus bursae narrow. Cestum, a bent plate reaching into bursa copulatrix. Ventricle below limen with a narrow transverse fold at each side (Slides No. 788 D, holotype, paratype No. 789 D).

Lake Habbema, 3250–3300 m, August 27, 1938 (holotype), August 19, 1938. Four specimens.

**Hermenias eugena** spec. nov. (fig. 339)

*εὐγενής* = noble

♀ 19 mm. Head whitish. Antenna with flagellum dark fuscous, becoming blackish towards base, scape whitish, dark fuscous above. Palpus whitish, basal segment densely irrorated with blackish-fuscous; median segment suffused with greyish-fuscous except towards apex above and with a broad, very oblique transverse median interrupted blackish band; terminal segment dark fuscous mixed with whitish. Thorax whitish, touched with pale fuscous, shoulder and apex slightly mixed with fuscous. Abdomen pale fuscous-whitish. Legs pale fuscous-whitish, anterior tibia blackish above, anterior and median tarsi and median tibia black-banded. Fore



wing elongate, moderately dilated, costa gradually moderately curved throughout, apex rounded, slightly projecting, termen hardly concave, moderately oblique. Whitish irrorated with pale ochreous-tawny, partially suffused with fuscous-grey, markings black. Anterior half of costa to before middle with a row of small dots; a larger dot before  $\frac{1}{4}$ ; a moderate subcostal dot below and beyond this; posterior half of costa from middle to before apex with five moderate triangular dots, becoming slightly larger posteriorly, alternating with minute transverse strigulae; a rounded small spot at about  $\frac{1}{5}$  of fold, sometimes connected with a dot above and before this spot, also narrowly connected along fold with a large strongly inwardly oblique irregular blotch from  $\frac{1}{4}$  to middle of disc; this blotch narrowed posteriorly, with upper edge twice concave, with a short projection in middle, lower edge irregularly rounded, anterior and posterior edges truncate; a greyish more or less developed suffusion occupying about third fourth of wing between costa and cell; dorsum with a dot beyond base, with a row of small narrow marginal marks from beyond this to beyond middle, and with a large inwardly oblique transverse mark from  $\frac{3}{4}$ ; the last mentioned mark reaching almost to middle of disc, somewhat dilated above, constricted below middle, with top horizontal, truncate; a faint outwardly oblique brownish line between this mark and  $\frac{3}{5}$  of costa; a vertical transverse streak from apex to  $\frac{3}{4}$  of termen, dilated in apex, angulate and dilated in middle so as to form a longitudinal spot, bluntly projecting anteriorly; this streak is narrowed below, with a short projection to middle of terminal edge; a small dot in tornus. Cilia pale ochreous-whitish, suffused with dark grey posteriorly except tips of scales, a narrow grey dark antemedian line opposite apex, an indication of a subapical transverse shade from apex to  $\frac{2}{3}$  of termen; basal half of cilia with two large black bars opposite middle of termen and a narrow bar in tornus. Hind wing greyish-fuscous-bronze, paler towards base, with slight cloudy marbling. Cilia pale greyish-fuscous, basal third darker fuscous.

Limen, a large rectangular rising plate. Ductus bursae rather long. Cestum represented by some three plicate sclerotizations, middle longest (Slide No. 787 D, holotype).

Top Camp, 2100 m, January 22, 1938 (holotype), January 9 and 25, 1938. Three males. One paratype (damaged) with costal half of wing considerably suffused with dark grey.

### *Hermenias textrix* spec. nov. (fig. 349)

♀ 21–22 mm. Head and palpus light brownish-ochreous, basal half of palpus dark brown, terminal segment fuscous. Antenna light brown, base dark brown, scape light brownish-ochreous. Thorax light brownish-ochreous, mixed with pale ochreous and bright brownish-ochreous, apex mixed with blackish-brown. Abdomen and legs light ochreous-greyish, anterior and median tibia and tarsus dark fuscous, pale-ringed. Fore

wing rather narrow, dilated, broadest at  $\frac{3}{4}$ , costa hardly curved, bent and distinctly prominent at  $\frac{3}{4}$ , apex angulate, termen straight, moderately oblique. Pale whitish-ochreous, densely transversely strigulated along costal half, densely retinate and suffused along dorsal half and especially on terminal third of disc with bright ochreous and tinged brownish; markings blackish-brown. Anterior half of costa with a row of minute dots; larger dots: one beyond base of costa, one before  $\frac{1}{4}$  and one before middle; two last mentioned dots triangular, continued in disc by narrow brownish suffused line reaching to middle of disc; posterior half of costa with five moderate semioval dots, tolerably equidistant, alternating with small transverse strigulae, becoming slightly larger posteriorly; last dot largest, in apex; a large wedge-shaped or erect-ovate, inwardly oblique patch just above dorsum beyond base, reaching  $\frac{3}{4}$  across wing: this patch followed by a larger elongate patch in disc below middle, reaching from before  $\frac{1}{4}$  to beyond middle of wing; upper edge of this patch horizontal, with three small dentations: at extremities and before middle, respectively; lower edge horizontal, with one dentation on posterior extremity, anterior edge straight, inwardly oblique, posterior edge tolerably parallel to anterior, convex; an inwardly oblique transverse streak from  $\frac{3}{4}$  of dorsum to just below middle of wing at  $\frac{3}{4}$ , slightly curved below, clavate; a small dot on upper angle of cell connected by a vertical fine brownish streak with preceding; a vertical transverse series of small short streaks from below penultimate costal dot almost to tornus, uppermost streak longer, suffused with brownish, sometimes dissolved so as to form blackish-brown irroration; a rather ill-defined zig-zag brown line along upper  $\frac{3}{4}$  of termen, often interrupted, connected with penultimate costal dot by greyish-fuscon suffusion. Cilia greyish-ochreous, basal third pale grey, with a few dark brown bars above middle of termen and in tornus. Hind wing light fuscon-bronze, somewhat darker towards apex; cilia concolorous, basal third slightly darker.

Limén, a moderate plate, bluntly rounded above, base slightly dilated, encircled by a strong band, concave above. Cestum, a moderate furcate plate above and some weak folds at base of ductus bursae (Slide No. 774 D, holotype).

Lake Habbema, 3250–3300 m, end July—end August, 1938 (holotype, paratype). Two females. Allied to *H. asbolandra* (MEYRICK) from Papua.

### ***Hermenias corticina* spec. nov. (figs. 342, 354, 357)**

♂ 24 mm, ♀ 24–27 mm. Head in male light grey, face darker grey, in female pale ochreous. Antenna grey. Palpus long, in male dark fuscous-grey; median segment mixed with pale grey in middle and more so towards apex; terminal segment blackish-grey, tip whitish; in female palpus pale ochreous mixed with dark fuscous, basal segment dark fuscous, median segment with a very oblique submedian transverse dark fuscous

band. Thorax in male white, suffused with dark grey anteriorly; thorax in female ochreous-whitish, shoulder suffused with tawny. Abdomen whitish. Legs ochreous-whitish, anterior and median tibia and tarsus suffused with blackish in male, suffused with dark fuscous in female, pale-ringed. Fore wing elongate, narrow, dilated, especially in male; costa in male with a strong thickened fold to  $\frac{3}{5}$ , concealing a pencil of long white hairs; costa gradually moderately curved throughout, apex rather pointed, termen straight above, rounded beneath, moderately oblique. Whitish-greyish or pale ochreous, densely irrorated and retinate with pale and dark fuscous, less so in male; in female also more or less suffused along costa and posteriorly with brownish-tawny; markings of rather varying colour: in male dark fuscous-grey, in female fuscous-brown to blackish-fuscous. Male. Costal fold light grey, towards base and along upper edge suffused with black; lower edge of costal fold with a row of about six dentate black dots posteriorly to before extremity of that edge; costa beyond fold somewhat darker greyish, indistinctly dotted with dark fuscous grey; an irregular large patch of blackish-fuscous suffusion in disc, obliquely produced across fold, dilated below fold and faintly reaching dorsum; ill-defined patches of similar suffusion below fold, viz. beyond base of wing and above dorsum; a cloudy rounded spot of dark fuscous suffusion above and slightly before tornus below middle of wing, nearer to lower edge of cell than to termen, sometimes almost connected by transverse undulate coarse dark greyish-fuscous strigulation with costa; sometimes this strigulation forming a more or less distinct patch along posterior third of costa to apex, connected by a more distinct undulate streak with termen above tornus; dorsum with a row of rounded greyish dots. Female. More ochreous, tawny or fuscous-tinged. Anterior half of costa with five moderate blackish-fuscous dots alternating with minute transverse strigulae; third and fifth dot each connected by a suffused undulate oblique transverse line with discal patch; posterior half of costa with five larger triangular dots, becoming still larger towards apex, last dot apical; discal markings fuscous-black, more or less suffused, sometimes less distinct; these markings consisting of a rounded spot on fold beyond base connected by an oblique streak of fuscous suffusion with dorsum beyond base; of a large strongly inwardly oblique discal patch along fold just below middle of wing, occupying somewhat less than second fourth of wing length, if well-defined then formed by an elongate spot between fold and cell and by a smaller diamond-shaped spot below fold, strongly projecting anteriorly; sometimes this part fulvous; a rounded spot above and before tornus, upper anterior end angulate, pointing towards lower edge of cell, lower edge suffused, sometimes this spot small; a streak of tawny suffusion just below and along fold, not reaching dorsum, paler and broadly dilated posteriorly, so as to connect posterior half of fold with posterior half of costa, leaving a preterminal area of ground colour which is densely transversely strigulated and irrorated with dark

fuscous; sometimes a more distinct dark fuscous vertical streak from below subapical costal dot to termen above tornus, sinuate and narrowed below; upper part of this streak sometimes dilated so as to form a sub-triangular spot which is narrowly connected posteriorly with apical dot; sometimes cell posteriorly more suffused with tawny; a dark fuscous dot on upper angle of cell; a curved narrow line along closing vein; one-two small dots on upper edge of cell before its end. Cilia in both sexes dirty whitish-ochreous mixed with fuscous; basal third paler, blotched with dark fuscous; a faint interrupted subapical line around apex and along upper third of termen. Hind wing pale ochreous-greyish or fuscous-greyish, somewhat darker towards apex, with a bronze gloss; cilia pale ochreous-whitish, tinged bronze-greyish towards apex.

Uncus bipartite, forming two short-haired horns. Socius large, hairy above, bristled below. Valva constricted at  $\frac{3}{4}$ , cucullus transversely ovate, edge thickened, with two teeth, sacculus moderately curved. Aedoeagus short, narrowed and pointed. Cornuti, a sheaf of unequal spines. Anellus strong (Slide No. 790 D, holotype).

Limen T-shaped, sides curved downward, stalk short. Cestum, a pair of small sclerotizations in upper half of ductus bursae, a plicate sclerotization at its base (Slide No. 791 D, allotype).

Lake Habbema, 3250–3300 m, end July—end August, 1938 (holotype, male), August 19, 1938 (allotype, female). Other specimens dated end July—end August, 1938. Two males, nine females.

### *Hermenias tristis* spec. nov. (fig. 343)

♂ 20–22 mm. Head, palpus and thorax grey, gradually irrorated with darker grey, palpus somewhat darker. Antenna pale ochreous, scape dark grey. Abdomen light ochreous-grey. Legs light grey, anterior tibia and tarsus infuscated and light-ringed above. Fore wing elongate, narrow, with a strong narrow thickened costal fold to  $\frac{3}{5}$ ; costa little curved at base, stronger curved and slightly prominent along posterior  $\frac{3}{4}$  of fold; apex subobtuse, termen hardly sinuate above, rounded beneath, moderately oblique. Light grey, densely irrorated and on costal third evenly suffused with dark fuscous-grey; lower two-thirds of wing densely irrorated with dark fuscous, which irroration forms a cloudy elongate suffusion on middle of disc and an ill-defined inwardly oblique streak from dorsum before tornus to middle of disc beyond cell; base of fold suffused with black, costa beyond this very faintly transversely strigulated with blackish; a narrow terminal streak of dark fuscous irroration. Cilia fuscous-greyish, more or less irrorated with darker fuscous, irroration forming two longitudinal lines. Hind wing greyish-fuscous, becoming darker bronze-fuscous towards apex, anterior half except dorsum, disc and two-thirds of costa suffused with dull milky whitish-fuscous-grey; cilia pale greyish-fuscous, basal third darker fuscous.



Uncus weak, almost bipartite, halves clavate. Socius, a large, weak pad, with top pointed; inner side of socius moderately bristled above. Valva strongly constricted beyond middle, little bent; cucullus subtriangular, with upper angle rounded, lower angle rectangular; with two large and numerous small marginal teeth. Aedoeagus rather short, narrowed. Cornuti, a sheaf of slender bristles. Anellus very strong (Slide No. 776 D, holotype).

Lake Habbema, 3250–3300 m, September 1, 1938 (holotype, male), end July–end August, 1938, August 26, 1938. Three males. Distinct by absence of markings. Allied to preceding species.

***Hermenias xylogena* spec. nov. (fig. 355)**

ξύλον = wood, γενάω = to beget

♀ 21–22 mm. Head light brown, face pale ochreous, a fulvous tuft projecting over face. Antenna brownish, finely ringed and suffused towards base with blackish-fuscous, scape light brown. Palpus long, fuscous-brownish mixed with whitish; basal segment blackish-fuscous; median segment with a blackish-fuscous subbasal transverse band. Thorax fuscous, suffused with light brown anteriorly; tegula fulvous with white apex. Abdomen pale ochreous. Legs whitish, anterior and median tibia and tarsus blackish, pale-ringed. Fore wing elongate, rather narrow, dilated, costa little curved, apex moderately obtuse, termen straight, little oblique. Pale ochreous, densely suffused with tawny and light brown; markings dark fuscous. Anterior half of costa with a row of small dots, larger and smaller dots alternating; dot at about  $\frac{1}{4}$  produced along disc by a narrow outwardly oblique suffused line to cell; somewhat more than posterior half of costa with five large rounded suffused fuscous-greyish dots, alternating with small points, separated by pale ochreous ground colour; anterior of these dots largest, oblique-triangular, ultimate dot apical; a patch of coarse greyish-fuscous irroration extending below middle third of costa, connecting first, second and third large costal dots; lower margin of this patch ill-defined, dentate, reaching below upper edge of cell; base of wing suffused with brighter brown; a bright brown suffused inwardly oblique patch from  $\frac{1}{4}$  of dorsum, dilated above fold and occupying median third of cell; a rounded brownish spot irrorated with dark fuscous above dorsum before tornus, just below middle of disc, connected by transverse dark greyish-fuscous strigulation with dorsum; this strigulation extending between preceding spot and termen, reaching along the latter from tornus to below apex; dorsal edge dotted with blackish-fuscous; terminal edge with a narrow dark fuscous streak. Cilia greyish-fuscous with a broad subbasal blackish-fuscous streak, an indication of a narrow subapical streak towards apex. Hind wing with veins 6 and 7 closely approximated towards base; whitish-greyish, posterior half slightly suffused with greyish-fuscous. Cilia pale greyish, towards tornus tinged pale ochreous.



Limen, a broad plate, pointed below, with a projection above, which is trapezoid, angles rounded. Cestum, two folded sclerotizations: above middle of ductus bursae and subterminal (Slide No. 786 D, holotype).

Lake Habbema, 3250–3300 m, August 27, 1938. Two specimens. Allied to *H. corticina* spec. nov.

### **Bathrotoma MEYRICK, 1881**

*Bathrotoma* MEYRICK, 1881, Proc. Linn. Soc. N.S. Wales, vol. 6, p. 675; *ibidem*, vol. 36, pp. 226–227, 1911. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 31, 1929.

### ***Bathrotoma angelica* spec. nov. (fig. 344)**

♂ 11 mm. Head white, face black. Antenna with seape strongly elongate, black, mixed above with white, flagellum with basal fifth to notch, black, strigulated with white above, notch small; remainder of flagellum white. Palpus black. Thorax (damaged) white, black anteriorly. Abdomen (damaged) whitish mixed with black; valva pale ochreous with upper edge broadly black. Legs white, ringed with black (posterior pair missing). Fore wing narrow, elongate, gradually dilated, pointed; costal fold narrow, to before  $\frac{3}{5}$ , concealing a thick brush of pale ochreous hairs; costa almost straight, apex pointed, termen strongly sinuate, rather oblique. Glossy silver-white, faintly tinged greenish-bluish; markings deep bronze-brown with violet gloss. Costal fold bronze-brown; an ovate patch occupying less than third fourth of costa, not reaching middle of disc; a short vertical sinuate line from middle of lower edge to above fold; a triangular slightly inwardly oblique patch on dorsum before tornus to middle of disc, with top connected with a longitudinal moderate streak occupying about middle third of space between cell and termen; two-three interrupted vertical transverse lines traversing preceding streak and connecting it with a transverse dot beyond  $\frac{4}{5}$  of costa which is preceded by one and followed by two minute transverse costal marks; a transverse line before apex, triangularly dilated on costa; anterior  $\frac{2}{3}$  of wing (damaged) moderately irrorated with greyish-bronze, less so towards dorsum. Cilia dark fuscous-bronze; two white bars; opposite apex above and in tornus, respectively. Hind wing light grey, suffused with fuscous towards apex and termen. Cilia greyish-fuscous, becoming paler towards tips, a pale basal line.

Genitalia much resembling the *Hermenias*-type, especially those of *H. corticina* spec. nov. Uncus, a slender horn. Socius large, weak, top narrowed and slightly curved upward, haired above, sparsely bristled towards top beneath. Valva straight, lower edge emarginate beyond middle; cucullus dilated, rounded, with two large marginal teeth and with a series of small teeth along lower edge. Aedoeagus moderate, slender, almost straight, top obliquely truncate (Slide No. 806 D, type).

Mist Camp, 1800 m, January 17, 1939. One specimen.

This is a very distinct species.

**Allohermenias** gen. nov. (fig. 359)*ἀλλός* = other than, *Hermenias* = generic name

Head roughish, side-tufts roughly spreading. Ocellus posterior. Antenna without notch, somewhat thickened, ciliated, ciliations  $\frac{1}{2}$ . Palpus moderately long, slightly sinuate; median segment triangularly dilated by roughly projecting scales above and beneath; terminal segment moderate or rather short, obtuse. Thorax without crest. Fore wing elongate, rather narrow, with a small costal fold in male. 1b furcate, 2 from  $\frac{3}{5}$ — $\frac{2}{3}$ , 3 from angle, 4 approximated at base, 5 parallel, 4—6 hardly approximated posteriorly, 7 and 8 stalked, 7 to termen, 9 approximated, 10 nearer to

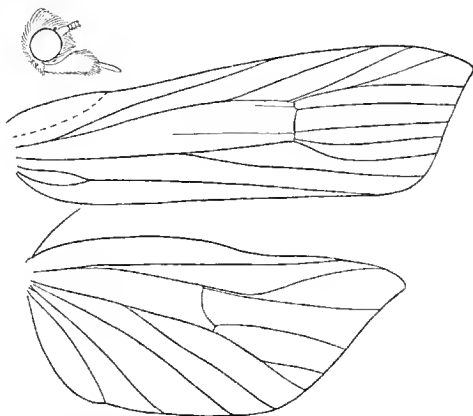


Fig. 359: *Allohermenias tenuitexta* gen. nov., spec. nov., male head and neurulation.

9 than to 11, 11 from  $\frac{1}{6}$  of upper edge of cell. Hind wing with a cubital pecten which is sometimes very weak; 2 from just beyond  $\frac{1}{2}$ , 3 and 4 long-stalked from angle, 5 closely approximated towards base, 6 and 7 stalked or closely approximated towards base. Uncus not bifid.

Typus generis *Allohermenias tenuitexta* spec. nov., male.

Judging by the neurulation of the fore wing and by the male genitalia allied to *Hermenias*, but without antennal notch in male. Structurally nearest to *Acroclita* LEDERER, but with veins 6 and 7 in hind wing sometimes stalked, and with an entirely different facies and different male genitalia.

Key to the species of *Allohermenias*

1. A well-defined, rounded-triangular dark spot on  $\frac{3}{4}$  of dorsum; hind wing grey . . . . . *tenuitexta* spec. nov.
- An ill-defined transverse dark mark on  $\frac{3}{4}$  of dorsum, with base partially obliterate; hind wing pale grey . . . . . *subpetraea* spec. nov.

**Allohermenias tenuitexta** spec. nov. (figs. 356, 359)

♂ 15.5—17 mm. Head whitish mixed with fuscous, side tufts dark fuscous laterally. Antenna black, scape mixed with white; flagellum along posterior

$\frac{4}{5}$  below with pale ochreous ciliations. Palpus black; median segment with a subbasal band, a median dot and apex irrorated with white; terminal segment irrorated with white, white-tipped. Thorax white, mixed with fuscous in middle; tegula with dark fuscous basal half. Abdomen dark fuscous, posterior half glossy fuscous-grey, venter whitish. Legs grey, anterior and median tibia and tarsus black above, with broad white rings. Fore wing elongate, moderately dilated, costa straight, gently impressed along median third, apex subacute, termen hardly sinuate, rather oblique. Blackish-fuscous, costa black; markings white, irrorated with light brownish-fuscous. A sinuate longitudinal fascia, broad, originating from below costa beyond base, almost connected with costal edge by a row of whitish transverse strigulae; this fascia slightly outwardly oblique to dorsum, thence narrowed, along dorsum to beyond middle, thence straight to below  $\frac{4}{5}$  of costa, with a broad, clavate branch from above middle of disc to termen before tornus; this fascia white, anterior third densely irrorated with light fuscous, edges rather suffused, marked with a few blackish dots below fold; posterior part less irrorated, well-defined; ascending branch with serrate edge; branch to tornus with anterior edge serrate, posterior considerably rounded, touching termen before tornus at one point; light fuscous irroration forming rather well defined blotches: a subtriangular smaller blotch on lower angle of cell connected above with a black sinuate strigula along closing vein bearing a round black dot on upper angle of cell; and a larger elongate transverse blotch from above termen before tornus to middle of disc well beyond cell; three black dots on costa before apex and in apex, separated by pairs of moderate white transverse marks, anterior dot edged and preceded by single white strigulae; fuscous-black ground colour forming an elongate-ovate patch before upper half of termen, connected with apical black dot by a longitudinal light fuscous-brownish spot; this patch also connected with termen above tornus by a narrow vertical streak of the same colour; terminal edge black; a white marginal strigula below apex; a few irregularly scattered white submarginal dots along middle third of termen; a larger white dot on termen just above tornus. Cilia black around apex, along termen black with white basal half which is irregularly barred with black; cilia around tornus and dorsum white with a pair of elongate black spots on basal half. Hind wing dark fuscous-grey; cilia pale grey with dark greyish-fuscous basal third.

Tegumen broad. Uncus short, top with a moderate flattened projection. Socius large, forming a median thick bristled pad and a lateral slightly curved porrect projection. Transtilla narrow, straight. Valva narrow, constricted before middle, cucullus large, strongly dilated, with three marginal teeth. Aedoeagus rather long, flattened dorso-ventrally (Slide No. 828 D, holotype).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 28, 1938 (holotype), October 17, 1938. Two specimens.

*Allohermenias subpetraea* spec. nov. (fig. 346)

♂ 16 mm. Head dark fuscous, face whitish, rising tufts on vertex with pale fuscous tips. Antenna blackish. Palpus blackish, apices of median and terminal segments narrowly white. Thorax black mixed with whitish, posterior half of tegula whitish. Abdomen grey mixed with dark grey. Legs black, tarsi pale-ringed. Fore wing elongate, considerably dilated, without costal fold; costa slightly curved throughout, posterior half appearing prominent by roughish costal cilia; apex pointed, termen gently concave, considerably oblique. Dark fuscous, strewn with glossy whitish scales, markings blackish. Costa blackish mixed with whitish scales; three incomplete tolerably equidistant blackish transverse streaks: first inwardly oblique, beyond base, from above fold to dorsum, almost interrupted in fold by whitish scales; second and third streaks angulate above middle of disc, second streak from below costa to vein 1b, third streak at about  $\frac{3}{5}$ , from costa to that vein; indication of a fourth short streak, vertical, halfway between second and third; a wedge-shaped, inwardly angulate streak on costa just beyond middle, running to middle of disc, on costa broader than preceding marks, almost connected with a moderate blackish spot just beyond lower edge of cell; this wedge-shaped streak obliquely extending halfway towards dorsum before tornus, with upper extremity excavate, connected anteriorly by a suffused blackish oblique line with  $\frac{3}{4}$  of dorsum; posterior half of costa with a longitudinal mark and two triangular dots, ultimate dot largest, apical: these markings separated and preceded by three patches of glossy white scales, each patch finely traversed by a black vertical strigula; posterior part of wing from middle of dorsum as far as lower edge of cell and from beyond cell to apex as far as vein 9: denser and almost continuously scattered with glossy white scales; not thus irrorated with white: a patch of ground colour along dorsum below the above mentioned black ovate spot, and along it a longitudinal patch of ground colour from termen below apex halfway towards cell; the last mentioned patch bearing two blackish lines along veins, and extended below by a blackish interrupted streak along termen almost to tornus; dorsum cloudily dotted with fuscous. Cilia dark fuscous, whitish towards tornus; a narrow white bar opposite upper half of termen; basal third of cilia white, barred with dark fuscous. Hind wing rather light fuscous-grey, more tinged fuscous towards apex; cilia pale fuscous, a narrow darker fuscous subbasal shade.

Tegumen moderately erect. Uncus, a minute projection. Socii large, rigid, clavate, porrect pads. Gnathos, a submembraneous, transverse band with thickened upper edge. Valva elongate, strongly constricted before middle, cucullus obliquely ovate, sacculus angularly projecting. Aedoeagus slender, curved. Anellus raised (Slide No. 857 D, type).

Scree Valley Camp, 3800 m, September 20, 1938. One specimen.



**Spilonota STEPHENS, 1834**

*Spilonota* STEPHENS, 1834, Ill. Brit. Ent., Haust., vol. 4, p. 90. MEYRICK, Proe. Linn. Soc. N.S. Wales, vol. 36, pp. 227-228, 1911. Rev. Handb., pp. 528-529, 1928. FLETCHER, Mem. Agric. Ind., Ent., vol. 11, p. 208, 1929.

*Strepsiceros* MEYRICK, 1881, Proc. Linn. Soc. N.S. Wales, vol. 6, p. 678.

*Strepsicrates* MEYRICK, 1887, Trans. N. Z. Inst., vol. 20, p. 73. Etc.

**Key to the Papuan species of *Spilonota***

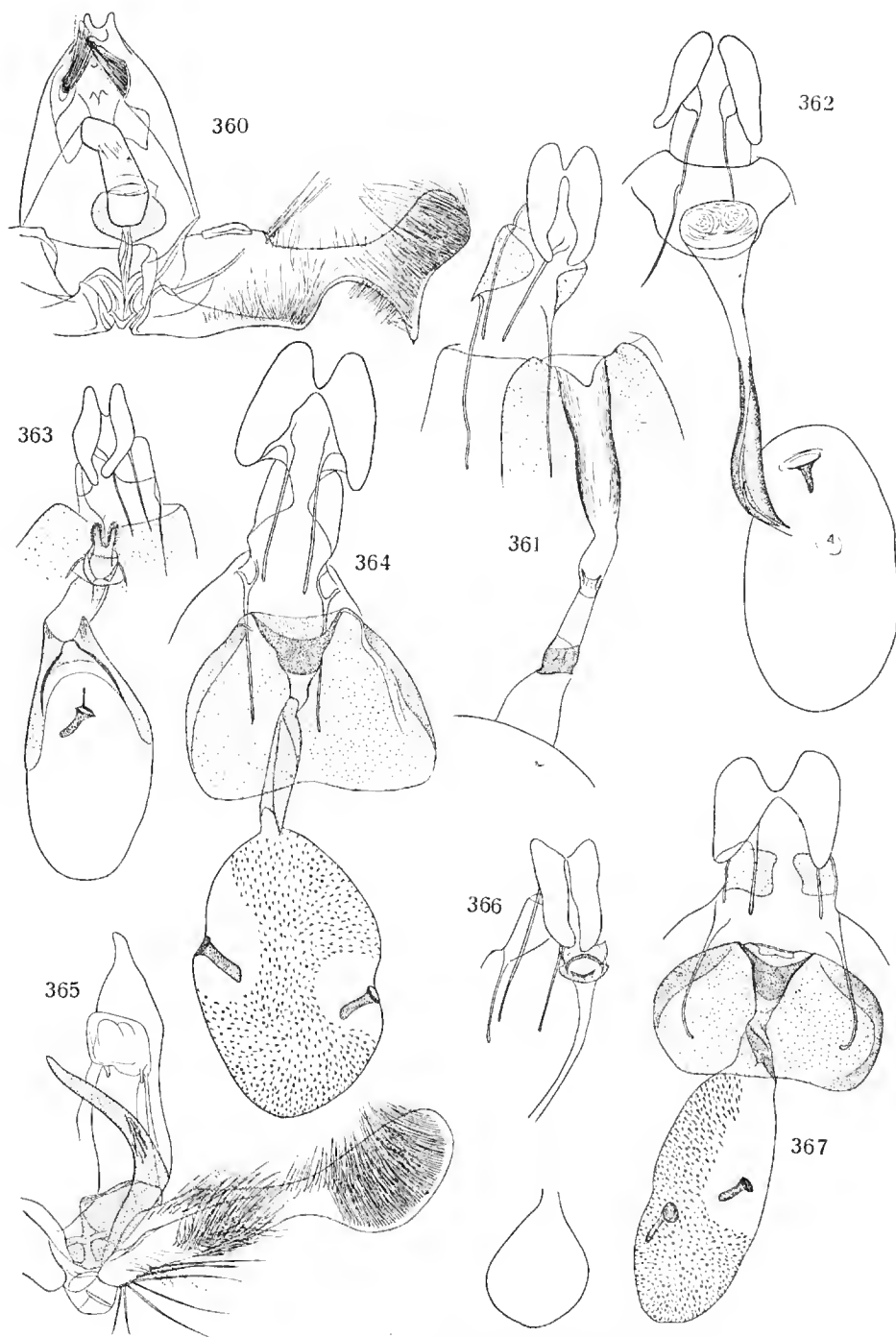
1. Light ochreous-olive; a glossy whitish circular mark before tornus, deeply indent below. . . . . *selene* spec. nov.  
Not thus . . . . . 2
2. Reddish-ferruginous; transverse markings conspicuous, olive-whitish . . . . .  
. . . . . *pyrochlora* spec. nov.  
Not thus . . . . . 3
3. A longitudinal submedian blackish streak from base, dorsum whitish . . . . .  
. . . . . *stichoceros* MEYRICK  
No such streak. . . . . 4
4. Pale fuscous, suffused with darker, light markings ill-defined . . . . .  
. . . . . *lobata* spec. nov.  
Not thus . . . . . *semicanella* WALKER

***Spilonota selene* spec. nov. (fig. 367)**

*σελήνη* = moon

♀ 21 mm. Head glossy white, touched with pale yellowish. Antenna pale ochreous, serrulations dark fuscous below; base of flagellum with a blackish-fuscous spot. Palpus whitish touched with pale yellowish; basal segment suffused with pale tawny, irrorated with blackish; median segment with basal third pale tawny, a broad transverse median dark fuscous band extended along lower edge of this segment almost to apex; a faint suffused fuscous spot below apex of median segment above; terminal segment slightly irrorated with fuscous in middle. Thorax light tawny-ochreous, shoulder suffused with fuscous. Abdomen pale greyish-ochreous, apex grey. Legs tawny-ochreous, anterior and median tibia and tarsus blackish-fuscous, tawny-ringed. Fore wing elongate, costa gently curved along basal and apical thirds, concave in middle, apex pointed, triangularly projecting, termen strongly sinuate, oblique. Light golden-tawny-ochreous, becoming tawny-olive along lower half posteriorly; markings glossy silvery-white and fuscous-black. Basal patch large, along costa to  $\frac{1}{4}$ , along dorsum to before middle; edge of patch strongly angularly projecting, above outwardly oblique to middle of disc, horizontal to about middle of wing, thence inwardly oblique; this basal patch pale tawny-ochreous, edge suffused with bright tawny, narrowly suffused above, broadly below; a faint row of small fuscous-blackish dots above middle of disc from base to angulation, more distinct posteriorly; base of costal edge blackish; anterior half of costa with a row of blackish dots alternating with minute transverse strigulae, largest dot on edge of basal patch; two approximated blackish dots before middle of costa, connected by fuscous-





Genitalia of Eucosminae. Fig. 360: *Spilonota lobata* spec. nov., male. Fig. 361: *Crocotola hyperphytes* spec. nov., female. Fig. 362: *Enarmonia alternans* spec. nov., female. Fig. 363: *Acroclita allodapa* spec. nov., female. Fig. 364: *Spilonota pyrochlora* spec. nov., female. Fig. 365: *Enarmonia alternans* spec. nov., male. Fig. 366: *E. inconspicua*, spec. nov., female. Fig. 367: *Spilonota selene* spec. nov., female.

tawny suffusion, which forms an oblique wedge-shaped transverse spot reaching to cell; this spot faintly speckled with blackish along edge, top connected with anterior extremity of an invert-semioval moderate longitudinal spot of blackish irroration above middle of disc, suffused with olive-tawny above, reaching to closing vein; posterior half of costa with two small points and four moderate longitudinal marks, last mark apical; these marks fuscous-blackish, alternating with pairs of transverse snow-white streaks which become longer posteriorly, last pair forming a triangle before apex, centred with ground colour. Silvery-white glossy markings: a narrow longitudinal streak along middle of central third of disc, interrupted by blackish dots which become larger posteriorly; this streak running along upper edge of posterior projection of basal patch and sending off a rather irregular white streak to dorsum; this streak edging lower half of basal patch, and abruptly strongly extended just beyond cell so as to form a large semicircular thick crescentic shiny white spot; this spot occupying more than middle half of wing breadth, with lower edge angularly incised, anterior extremity with an interrupted white streak; this streak strongly narrowed below and running to  $\frac{3}{5}$  of dorsum; posterior extremity of crescentic spot connected by white irroration with tornus; a small vertical streak from termen just above tornus to vein 5; a narrow terminal streak from vein 5 to 7, abruptly narrowed to a line above this vein and running to apex. White markings edged with rows of blackish points in middle third of disc posteriorly; space from  $\frac{3}{5}$  of dorsum below and beyond crescentic spot as far as vein 8 suffused with tawny-olive, this suffusion faintly extended to dark costal streaks; median  $\frac{3}{5}$  of dorsal edge densely irrorated with fuscous-black. Cilia whitish touched greenish; cilia along lower half of termen, in tornus and along dorsum suffused with light brownish-ochreous. Hind wing light fuscous-grey, darker fuscous towards apex; cilia yellowish-white, suffused with pale yellowish-ochreous towards base.

Limen, a large ovate plate, stronger sclerotized laterally. Ostium, a small sclerotized funnel. Ductus bursae very short. Cestum, an oblique folded piece of chitine. Bursa copulatrix elongate, for three-fourth clothed with fine bristles. Signa moderate, nail-shaped (Slide No. 796 D, type).

Moss Forest Camp, 2600—2800 m, October 14, 1938. One specimen.

This is a distinct, elegantly coloured species.

***Spilonota pyrochlora* spec. nov. (fig. 364)**

$\pi\tilde{\nu}\rho$  = fire,  $\chi\lambda\omega\rho\acute{o}\varsigma$  = green

♀ 23 mm. Head whitish, touched with pale ochreous. Antenna slightly thickened, whitish, finely ringed with ferruginous above. Palpus whitish; basal segment except fringe and median segment anteriorly, below and on apical third, suffused with blackish, fringes whitish; terminal segment greyish. Thorax ochreous-whitish, shoulder ferruginous, tegula fulvous, tip ochreous. Abdomen and legs ochreous-whitish, anterior tibia and

tarsus black, white ringed (median legs missing). Fore wing elongate, narrow, dilated, broadest at  $\frac{3}{4}$ ; costa hardly curved at base, slightly bent at  $\frac{3}{4}$ ; apex rather narrow, rounded, projecting; termen strongly sinuate, oblique. Glossy white, faintly touched with greenish, irrorated with greenish-olive, less so towards middle of dorsum; markings deep reddish-brown, edges partially suffused with blackish. Costa dotted throughout with dark brown; basal patch large, from before  $\frac{1}{4}$  of costa to beyond  $\frac{1}{4}$  of dorsum; edge of basal patch strongly angulate, convex above and beneath, with a subacute projection in middle reaching to well before middle of wing; edge of patch somewhat suffused with darker brown; an irregular median mark: from costa before middle to cell, vertical, rather narrow, posterior lower angle erected so as to form a longitudinal streak, abruptly extended and filling posterior part of cell; posterior edge of mark sinuate, sharply black; lower edge of mark connected with a moderate longitudinal elongate-diamond-shaped spot on base of vein 3, with extremities narrowly erected respectively downward and upward; this spot tolerably parallel with lower margin of basal patch, edge partially suffused with black; a moderate elongate-ovate spot touching  $\frac{3}{4}$  of dorsum, connected above posteriorly with a larger subtriangular spot in disc well beyond cell between veins 2-5; both these spots not dark edged, former suffused with dark brown; a large patch in apex, with edge from before  $\frac{3}{4}$  of costa, strongly sinuate; this patch convex above, concave beneath, running to termen above tornus; upper half of patch deep reddish-brown, lower slightly irrorated with whitish-olive; a narrow white marginal line along upper half of termen; about three double white transverse marks on costa; dorsal edge dotted with blackish; olive irroration forming a continuous vertical moderate blotch in tornus, slightly edged with blackish posteriorly, faintly suffused with fulvous. Cilia fulvous mixed with paler rosy-ochreous, except along basal third. Hind wing light grey, paler towards dorsum, suffused with darker grey towards apex; cilia sordid whitish.

Female genitalia much like those in the preceding species. Limen larger. Ostium larger. Ductus bursae shorter. Cestum much longer. Eighth tergite erected and subtubular. Otherwise similar to preceding (Slide No. 807 D, type).

Scree Valley Camp, 3800 m, September 24, 1938. One specimen. Very distinct.

***Spilonota lobata* spec. nov. (fig. 360)**

♂ 14 mm. Head and thorax (damaged) whitish-ochreous. Antenna greyish-fuscous. Palpus whitish-ochreous, with two suffused blackish dots below upper edge of median segment. Abdomen dark fuscous, irrorated with blackish, anal tuft pale ochreous. Legs pale ochreous, anterior tibia slightly banded with fuscous. Fore wing elongate, broader at  $\frac{2}{3}$ , costa little curved, apex pointed, projecting, termen strongly sinuate above,

rounded, much projecting beneath, vertical. Pale whitish-tawny, densely transversely strigulated and suffused with tawny-fuscous. Costa finely transversely strigulated with dark fuscous. A dark fuscous very oblique straight line from costa beyond middle to about vein 9, on costa preceded by whitish colouring and below costa by a suffused moderate tawny spot; this line connected with dorsum by an ill-defined band of dark fuscous suffusion, strongly dilated below, extending along dorsum from  $\frac{1}{5}$  to tornus; another such narrow dark fuscous line from a small dark elongate dot on costa before  $\frac{3}{4}$ , less oblique, straight, to termen above middle, thence along termen to above tornus, extended there to a small suffused spot; two pairs of dark fuscous small transverse marks edged with white, on costa before apex: a fuscous transverse apical dot edged with white anteriorly, reaching below to middle of termen. Cilia tawny whitish, barred with blackish (damaged). Hind wing with dorsum extended into a large lobe which forms a pocket containing a long pencil of grey hairs; dark bronze-fuscous, semipellucant; cilia concolorous.

Uncus small, weak, two short horns, below these two short porrect projections and a median rising horn (possibly a very short gnathos). Socius large, elongate, pending, strongly bristled. Anus, two membranous flaps. Transtilla, a broad transverse weak band. Valva constricted beyond middle, cucullus obliquely projecting, rounded above, beaked, with a tooth beneath; sacculus rather weak. Aedoeagus weak, moderate. Anellus large (Slide No. 819 D, type).

Rattan Camp, 1200 m, February 19, 1939. One specimen.

#### *Acrolita* LEDERER, 1859

*Acrolita* LEDERER, 1859, Wien. Ent. Mon., vol. 3, p. 329. MEYRICK, Proc. Linn. Soc. N.S. Wales, vol. 36, pp. 234-235, 1911. Rev. Handb., p. 529, 1928. FLETCHER, Mem. Agric. Ind., Ent., vol. 11, p. 4, 1929.

*Palaeobia* MEYRICK, 1881, Proc. Linn. Soc. N.S. Wales, vol. 6, pp. 660-661.

*Holocola* MEYRICK, 1881, *ibidem*, pp. 669-670.

#### *Acroclita allodapa* spec. nov. (figs. 358, 363)

*ἄλλοδαπός* = from an other country

♂ 15 mm, ♀ 12-16 mm. Head tawny-fuscous in male, light tawny in female, face white. Antenna dark fuscous, paler towards base. Palpus (in male broken) tawny-greyish, apical edge of median segment and tip of terminal segment white. Thorax in male whitish-greyish, suffused with tawny anteriorly; thorax in female tawny, slightly mixed with fuscous, pleurae whitish. Abdomen tawny-whitish, suffused with dark grey above, except anal tuft. Legs whitish, suffused with fuscous or blackish above, white-ringed. Fore wing elongate, subovate, apex subfalcate; costa moderately curved, more so anteriorly; termen strongly excavate below apex, gradually strongly rounded beneath this excavation. White, partially suffused with glossy leaden-grey, irrorated with tawny, marked with



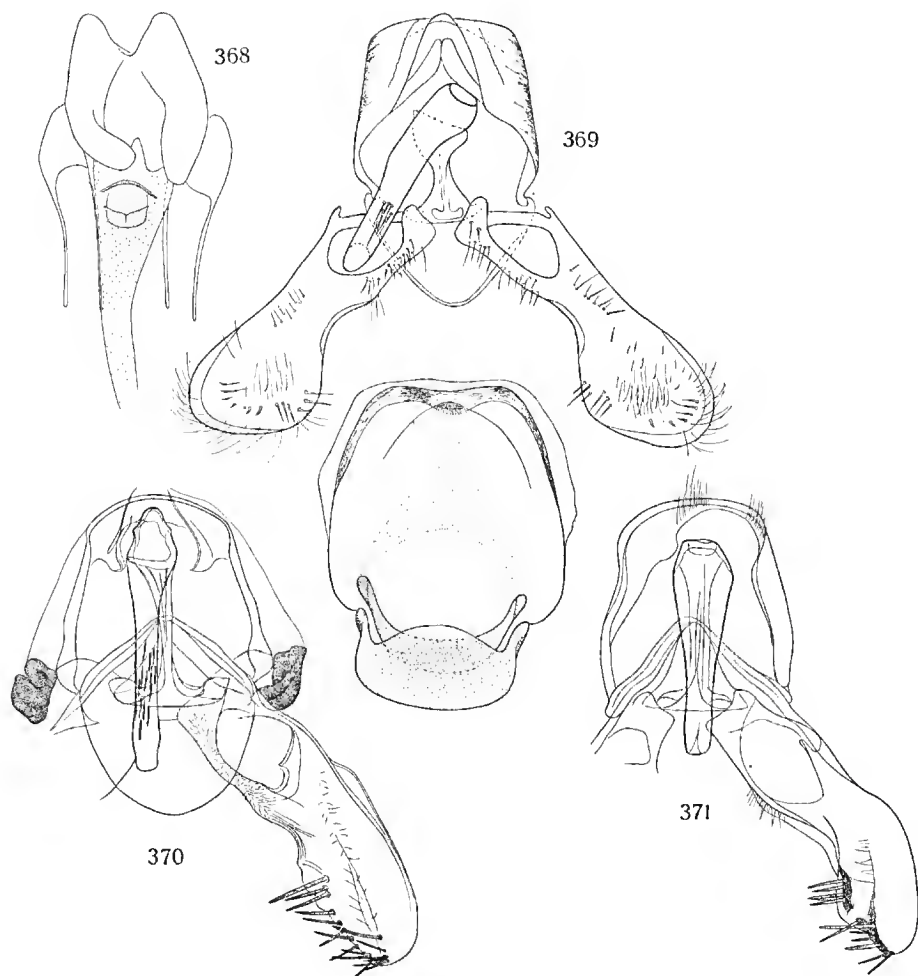
tawny and dark brown. Basal patch large, strongly acutely angulated on fold beyond its middle, extending along costa to  $\frac{1}{4}$ , along dorsum to before middle; edge of basal patch slightly concave above and below fold; patch suffused with tawny, less so towards base, less suffused in male, along costa with a row of dark brown dots; these dots more or less continued across wing by brown transverse lines parallel to upper edge of basal patch: this edge suffused with brown, much broader along subplical part; dorsal half of patch coarsely transversely strigulated with dark brown, slightly suffused with greyish; a conspicuous patch of white ground colour (less conspicuous in male) across upper half of wing beyond basal patch, dotted with dark brown on costa, sparsely strigulated with tawny-brown below this dotting; ground colour elsewhere suffused with leaden-grey, becoming darker and more glossy posteriorly; posterior half of costa black, with a row of five pairs of white transverse marks, becoming thicker and more remote from each other posteriorly; a slender, somewhat outwardly oblique U-shaped mark on middle of costa: black, narrowly edged with tawny, transverse part thickened, forming a moderate longitudinal mark just above cell; an irregular subtriangular tawny spot in middle of disc slightly beyond preceding mark, not reaching to fold below, more or less suffused with dark brown above and also before its edges; top of spot slightly extended posteriorly, in male almost touching preceding mark, in female connected with this mark by pale tawny suffusion; a transverse subtriangular large blotch before termen from below costa to above tornus: tawny, in male suffused with black except in middle; upper anterior angle of this blotch connected by an oblique tawny streak with  $\frac{2}{3}$  of costa; an inwardly oblique blackish streak from above middle of blotch running to the top of preceding discal spot; this blackish streak often extended (and then conspicuous), slightly curved, running from lower angle of cell to just before apex; a small spot in apex with a streak along upper  $\frac{2}{3}$  of termen and some two small transverse marks in tornus: blackish, latter reaching lower edge of preterminal blotch; apical edge below and terminal edge between markings narrowly white: a vertical streak of glossy leaden-grey ground colour before termen, traversed in middle and below apex by a minute black horizontal line; in male markings much obscured by an ill-defined blackish-grey suffusion on upper half of wing beyond its middle; posterior half of dorsum with some three small dark brown longitudinal marks. Cilia pale greyish-tawny, with faint transverse lines; cilia above and below termen suffused with whitish; cilia above apex with a large black patch, below this patch with a narrow white bar. Hind wing in male grey, paler towards base, tinged pale ochreous towards apex; hind wing in female pale golden-fuscous, tinged greyish; cilia pale golden-ochreous, a tawny antemedian line.

Male genitalia typical. Tegumen broad. Uncus and socii united, bifid, forming two densely haired clubs. Gnathos, a broad membrane with two oblique slits and two moderate trapezoid projections. Valva with cucullus



strongly dilated and curved. Aedoeagus small. Cornuti, a sheaf of spines. Anellus very strong (Slide No. 816 D, holotype).

Ostium and limen forming a small cup with obliquely truncate orifice, dorsal wall of cup erected so as to form two rising, short-haired projections. Ductus bursae short, simple. Bursa copulatrix peculiar: wall of upper half sclerotized and rigid laterally, this sclerotization deeply excavate ventrally



Genitalia of Eucosminae. Fig. 368: *Endothenia simplissima* spec. nov., female. Fig. 369: *Pseudogalleria inimicella* ZELLER (genotype), after HEINRICH. Fig. 370: *P. amethystina* spec. nov., male. Fig. 371: *P. toxotis* spec. nov., male.

and dorsally. Signa robust, nail-shaped (only one distinct in figure) (Slide No. 817 D, allotype).

Moss Forest Camp, five km northeast of Lake Habbema, 2800 m, October 14, 1938 (holotype, male). Moss Forest Camp, 2600–2800 m, October 11, 1938 (allotype, female). Lake Habbema, 3250–3300 m,

August 18, 1938. Iebèlè Camp, 2250 m, November 6, 1938. One male, three females. A typically marked species, related to the *A. naevana* group.

### *Eucosma* HÜBNER, 1826

*Eucosma* HÜBNER, 1826, Verz. bek. Schmett., p. 374. MEYRICK, Proc. Linn. Soc. N.S. Wales, vol. 36, p. 245, 1911. Rev. Handb., p. 542, 1928. FLETCHER, Mem. Agric. Ind., Ent., vol. 11, pp. 87-88, 1929.

*Epiblema* HÜBNER, 1827, Verz. bek. Schmett., p. 375, Etc.

### *Eucosma inconspicua* spec. nov. (fig. 366)

♀ 14 mm. Head and thorax greyish-fuscous. Palpus sordid pale ochreous. Abdomen dark fuscous-grey. Legs pale ochreous-greyish, anterior and median legs infuscated. Fore wing elongate-subovate, broadest in middle, costa gradually moderately curved, apex pointed, termen gently sinuate, very oblique. Fuscous-grey, somewhat suffused with bronze-fuscous posteriorly, cilia concolourous. Hind wing pale grey, irrorated with darker grey towards apex and termen. Cilia pale greyish, a grey antemedian line.

Ostium, an erect funnel, with upper rim and limen forming a ring. Ductus bursae narrow, moderately long, simple. Bursa copulatrix rather small, ovoid, simple (Slide No. 820 D, type).

Rattan Camp, 1200 m, March 6, 1939. One specimen.

### *Pseudogalleria* RAGONOT, 1885 (fig. 369)

*Pseudogalleria* RAGONOT, 1885, Ann. Soc. Ent. Fr., ser. 6, vol. 4, Bull., p. L-LI (type *P. inimicella* (ZELLER), from Texas). HEINRICH, U. S. Nat. Mus. Bull. 123, p. 12, figs. 39, 40, 413, 1923. FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 189, 1929.

*Cryptophlebia* WALSINGHAM, 1899, *syn. nov.*, Ind. Mus. Notes, vol. 4, p. 105 (type *C. carpophaga* WALSINGHAM, from India). FLETCHER, Mem. Agr. Ind., Ent., vol. 11, p. 61, 1929 (*syn. of Argyroploce* HÜBNER). BRADLEY, Bull. Entom. Research, vol. 43, p. 682, 1953 (*syn.: Pogonozada* HAMPSON).

*Pogonozada* HAMPSON, 1905, *syn. nov.* Ann. Mag. Nat. Hist., ser. 7, vol. 16, p. 586 (type *P. distorta* HAMPSON). BRADLEY, Bull. Entom. Research, vol. 43, p. 682, 1953 (*syn. nov. of Cryptophlebia* WALSINGHAM).

When studying the male genitalia and the general structure of the three following species it became evident to us that they must be congeneric with *Pseudogalleria inimicella* (ZELLER), from the Atlantic States of North America. The male genitalia of that species were figured and described by HEINRICH (*loc. cit.*): we reproduce his figures 39 and 40 here (our figure 369) to facilitate comparison.

Hitherto only *inimicella* was attributed to *Pseudogalleria*. However, the three Papuan species discussed below link *inimicella* with a widely distributed and well-known group of species, often injurious to cultivated crops, and mostly attributed to *Argyroploce* HÜBNER. For one species, *carpophaga* WALSINGHAM, a new genus, *Cryptophlebia*, was created by that author in 1889. This generic name, however, together with *Pogonazada*

HAMPSON, fall as synonyms of the obscure and awkward *Pseudogalleria*.

A few months ago an excellent revision of the species of "*Cryptophlebia*" was presented by Mr. J. D. BRADLEY (*Bull. Entom. Research*, vol. 43, pp. 679—689, figs. 1—8, pl. 24—25, January 1953). This paper, based on the study of the genitalia in the two sexes, clears up the chaotic confusion arisen in the past over the identities of some species belonging to this group. We are grateful to be able now to make use of Mr. BRADLEY's results.

Mr. BRADLEY records the following species of "*Cryptophlebia*" from the Papuan region:

*Carpocapsa repletana* WALKER, 1863 (*List Lep. Ins. B. M.*, vol. 28, p. 412) (syn.: *Argyroploce trichosema* MEYRICK, 1914, and *A. tetraploca* MEYRICK, 1928).

*Argyroploce strepsibathra* MEYRICK, 1928 (*Exot. Microlep.*, vol. 3, p. 446).

*Argyroploce phacacma* MEYRICK, 1931 (*l.c.*, vol. 4, p. 129).

*Argyroploce encarpa* MEYRICK, 1920 (*l.c.*, vol. 2, p. 349).

*Platyepplus rhynchias* MEYRICK, 1905 (*Journ. Bombay Nat. Hist. Soc.*, vol. 16, p. 586).

Mr. BRADLEY also records *toxogramma* which will be discussed below. Perhaps also "*Arothrophora* (?) "*ombrodelta* LOWER, 1898, (syn.: *Cryptophlebia carpophaga* WALSINGHAM, 1899), may be mentioned here. This species is recorded by Mr. BRADLEY from South India, Ceylon, Formosa, Java, Siam, Philippine Islands, Guam, Dampier Island and Australia, and it seems very probable that it also may occur in the Papuan region, as this is defined by us in this paper.

Because the above mentioned species are variable as to the colouring and markings, and also sexually dimorphous, we prefer to abstain from giving a key for the separation of all of them; the following short key will be sufficient for the separation of the three species discussed here.

Key to the three species of *Pseudogalleria* discussed below.

1. Subapical transverse fascia violet-fuscous, interrupted before termen; markings beyond this fascia tawny-ochreous . . . . . *amethystina* spec. nov.  
This fascia dark fuscous, not interrupted: markings beyond fascia tawny or fuscous . . . . . 2
2. Apical half of wing with about seven parallel complete transverse lines . . . . . *toxogramma* MEYRICK  
Apical half of wing with one dark transverse fascia and a series of irregular interrupted lines . . . . . *toxotis* spec. nov.

### ***Pseudogalleria toxogramma* (MEYRICK), 1925**

*Argyroploce toxogramma* MEYRICK, 1925, *Exot. Microlep.*, vol. 3, p. 143.

*Cryptophlebia toxogramma*, BRADLEY, *Bull. Entom. Research*, vol. 43, p. 686, 1953.

Distribution: New Guinea: Rook Island.

Araucaria Camp, 800 m., March 12, 1939. One male.

***Pseudogalleria toxotis* spec. nov. (fig. 371)***τοξότης* = archeress

♂ 20–22 mm. Head and antenna pale ochreous, the latter ringed with brownish. Palpus slender, ascending, pale ochreous tinged fuscous, terminal segment porrect, greyish. Thorax whitish-ochreous. Abdomen dark fuscous, paler towards base, anal tuft and venter pale ochreous. Legs ochreous, posterior leg whitish-ochreous, anterior and median tarsus dark fuscous above, pale-ringed, posterior tibia clothed with moderately dense long hairs above and beneath. Fore wing subovate, broad, dilated, costa strongly curved at base, little curved beyond this, stronger curved towards apex, apex rounded, termen straight, oblique. Pale whitish-ochreous, slightly suffused with light brownish along base of costa, markings dark fuscous irrorated with black. Base of costa with a row of small black dots; a large triangular outwardly oblique patch of blackish irroration suffused with dark fuscous, extending from before  $\frac{1}{4}$  to beyond middle of costa; acute top of this patch reaching  $\frac{3}{4}$  across wing, touching top of a moderate triangular tawny spot; this spot irrorated and suffused along anterior edge and along fold with blackish-fuscous, occupying less than posterior  $\frac{1}{4}$  of dorsum almost to tornus; this spot preceded by two narrow lines parallel to its anterior edge; these lines running from middle of dorsum to top of costal patch; a moderate, conspicuously dark, well defined streak rising from top of costal patch to  $\frac{3}{4}$  of costa, straight, slightly gradually dilated, acutely angulate on costa and descending to termen just or well below middle, curved and slightly narrowed below; this streak dark tawny-brown, edged and more or less suffused with black; terminal and apical areas each with about three blackish undulate lines, curved parallel to descending half of preceding fascia; first of these lines to above tornus, broad, suffused, greyish; second line touching descending branch of transverse streak in middle, suffused with pale tawny, sometimes obliterate; subapical streak narrow; a short broader transverse streak in apex; ground colour posteriorly sometimes slightly mixed with pale lilac. Cilia fuscous-lilac, anterior third dark fuscous with a pale basal line; in tornus cilia pale ochreous mixed with greyish. Hind wing deep blackish-fuscous, along dorsum pale grey, along  $\frac{3}{4}$  of costa whitish; cilia grey, anterior third dark fuscous with a narrow pale basal line; cilia along dorsum and along anal cells elongate, light ochreous-fuscous.

Genitalia very similar to the following species. No sclerotizations at base of tegumen. Valva somewhat bent in middle, cucullus less densely spined, sacculus hardly haired. Vinculum absent? (possibly broken off) (Slide No. 814 D, holotype).

Araucaria Camp, 800 m., March 8, 1939 (holotype), March 21 and 29, 1939. Three specimens. Allied to *P. toxogramma* (MEYRICK) but much smaller, markings quite distinct. Closely allied to the following species. The three present species have in common separate veins 3 and 4 in hind wing.

**Pseudogalleria amethystina** spec. nov. (fig. 370)*ἀμεθύστινος* = of amethyst

♂ 22 mm. Head, palpus, thorax and abdomen pale ochreous-whitish, palpus slightly suffused with greyish below upper edge, abdomen hairy, gradually becoming fuscous-ochreous towards apex, anal tuft pale ochreous. Legs light ochreous, suffused with fuscous above, pale-ringed, posterior tibia with long hairs above, strongly laterally compressed. Fore wing subtriangular, strongly dilated: costa considerably curved, apex moderately rounded, termen straight, oblique. Pale whitish-ochreous, suffused except along base, dorsum and termen with bright ochreous and orange-ochreous, also slightly suffused with pale lilac; upper two-thirds of wing from  $\frac{1}{5}$  to before  $\frac{3}{4}$  of costa suffused with blackish-violet, obliquely striated with deep reddish-ferruginous; anterior edge of this portion of wing suffused with ochreous-orange below costa, lower edge indefinite except below and beyond lower angle of cell, where it forms a rounded projection and is angularly deeply excavate beyond this projection almost to upper angle of cell; posterior edge of the above mentioned area well-defined, forming a long rather narrow acutely wedge-shaped oblique projection from costa to before middle of termen; this projection is edged by deep reddish-ferruginous streaks, dilated towards costa; lower of these streaks ending on costa beyond middle, upper streak on costa before  $\frac{3}{4}$ ; a small triangular reddish-ferruginous spot on middle of termen opposite apex of wedge-shaped projection; suffused transverse vertical deep reddish-ferruginous strigulae, below middle and above end of fold; a larger suffused irregular mark of the same colour well above tornus, almost touching wedge-shaped streak below; a few scales above tornus and a row of dots along dorsum, of the same colour; a curved wedge-shaped moderate suffused costal patch from costa before apex narrowly produced across wing to median terminal dot, orange-ochreous, suffused on costa and slightly irrorated below costa with dark ferruginous; costa beyond middle minutely dotted with pale ochreous. Cilia ochreous-whitish, with pale ochreous base, a violet-black blotch opposite terminal dot. Hind wing pale golden-ochreous, densely suffused with dark bronze-fuscous except in apex and along upper part of termen; cilia pale golden-ochreous, tips slightly infuscated, a fuscous antemedian line.

A large ferruginous strong sclerotization at each side, at the base of tegumen. Valva little bent, cucullus with stout spines, saeculus short-bristled, with a blunt point posteriorly. Vinculum a large rounded plate (Slide No. 818 D, type).

Arauearia Camp, 800 m, March 8, 1939. One specimen. Allied to preceding.

**Crocostola** gen. nov. (fig. 372)*κροκοστόλα* = clothed in orange

Head with appressed scales. Ocellus large, posterior. Proboscis moderate.



Antenna in female minutely pubescent. Palpus moderately long, sinuate, subascending; median segment with short, closely appressed scales, rather slender, gradually dilated posteriorly, slightly roughish above and at apex, with a few projecting marginal scales; terminal segment moderate, slender, subobtusate. Thorax without crest. Fore wing without raised scale-tufts, 1b furcate to  $\frac{1}{3}$ , 2 from towards angle (from about  $\frac{7}{8}$ ), 3 from angle, 4 separate, 3–5 tolerably equidistant, rather remote, 5 parallel, 7 to termen, 7–9 equidistant, distinctly separate, 10 closer to 9 than to 11, 11 from  $\frac{1}{2}$ , parting veins parallel, upper parting vein from halfway between 10 and 11 to below 7, lower parting vein from before 11 to below 5. Hind wing with cubital pecten, 2 from  $\frac{3}{5}$ , 3 from angle, 4 separate, slightly approximated, 5 remote, hardly approximated, 6 and 7 closely approxi-

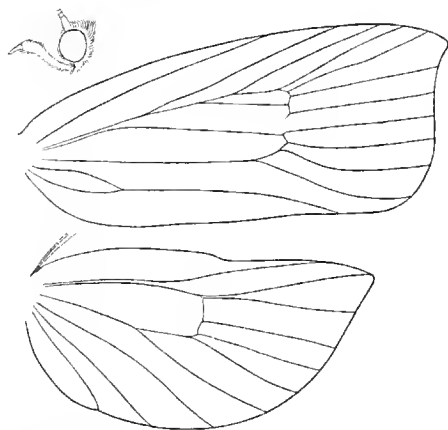


Fig. 372: *Crocostola hyperphyes* gen. nov., spec. nov., female, head and wing neuration.

mated towards base, 8 closely approximated to cell along basal third, then gradually diverging.

Typus generis *Crocostola hyperphyes* spec. nov., female.

An interesting form, quite distinct by peculiar origin of vein 2 in fore wing, and in this respect perhaps allied to *Collogenes* MEYRICK, 1931, from the Bismarck Islands, but otherwise considerably differing in neuration. It also approaches *Evora* HEINRICH, 1926, which in our opinion has incorrectly been sunk by FLETCHER as a synonym of *Argyroploce*. *Crocostola* differs from *Evora* by not crested thorax, by still more distad shifted origin of vein 2 in fore wing (this vein originates in *Evora* from  $\frac{3}{4}$ ), by remote vein 5 and by separate veins 3 and 4 in hind wing (connate in *Evora*).

***Crocostola hyperphyes* spec. nov. (fig. 361, 372)**

*ὑπερφυής* = peculiar

♀ 16 mm. Head and thorax orange-ochreous suffused with yellow, thorax posteriorly slightly infuscated, shoulder and palpus orange-fulvous.

Antenna grey ringed with fulvous, scape fulvous-yellowish. Abdomen light fuscous-ochreous, suffused above with dark fuscous, anal tuft ochreous-yellowish. Legs light ochreous, anterior and median legs suffused with fulvous above. Fore wing broad, subovate; costa gradually moderately curved; apex pointed, projecting, almost subfalcate; termen strongly sinuate above, little rounded beneath, slightly oblique. Light orange-fulvous, costa brighter; upper half to below costa as far as end of cell and as far as the terminal fourth evenly suffused with ochreous-yellow, dorsum as far as fold suffused with deep fulvous; this suffusion narrowly extended along wing edge to tornus and across  $\frac{3}{5}$  of wing, so as to form an ill-defined transverse inwardly oblique streak along closing vein, becoming narrow above, connected with a cloudy patch of orange-fulvous ground colour in apex. Cilia concolorous (damaged). Hind wing fuscous-brown with reddish-coppery gloss, cilia light fuscous (damaged).

Limen a large plate with emarginate upper edge, in middle of which is situated a long sclerotized tubular ostium. Ductus bursae short. Cestum, two moderate sclerotized bands. Bursa copulatrix very large, spheroid, simple (Slide No. 799 D, type).

Mist Camp, 1800 m, January 17, 1939. One specimen.

## ENARMONIINI

### *Enarmonia* HÜBNER, 1826

*Enarmonia* HÜBNER, 1826, Verz. bek. Schmett., p. 375. FLETCHER, Mem. Agric. Ind., Ent., vol. 11, p. 75, 1929, Etc.

*Cydia* HÜBNER, 1826, Verz. bek. Schmett., p. 375. Etc.

*Lasperyresia* HÜBNER, 1826, *ibidem*, p. 381. Etc.

*Carpocapsa* TREITSCHKE, 1829, Schmett. Eur., vol. 7, p. 231 (*non descr.*), *ibidem*, vol. 8, p. 160, 1830. Etc.

*Grapholitha* TREITSCHKE, 1830, *ididem*, vol. 8, p. 203. Etc.

### Key to the Papuan species of *Enarmonia*

1. Hind wing deep orange . . . . . *callizona* MEYRICK  
Hind wing fuscous or grey . . . . . 2
2. Ground colour of fore wing also on basal half deep orange-red or coppery-orange . . . . . 3  
Ground colour of fore wing on basal half not thus. . . . . 6
3. Fore wing reticulated with ochreous-brownish . . . . . *koenigiana* FABRICIUS  
Fore wing not thus marked . . . . . 4
4. Dark purplish-leadens streaks: one transverse, median; another from middle of costa to below apex, thence to tornus . . . . . *hemidoxa* MEYRICK  
No such streaks. . . . . 5
5. Fore wing with basal half orange separated by black line from coppery-brown posterior half . . . . . *mediana* WALKER  
Fore wing entirely orange, mottled and strigulated with black and metallic-bronze . . . . . *cinnabaritis* MEYRICK
6. Dark grey or dark fuscous, posterior third or half of wing light fulvous or orange-fulvous. . . . . 7  
No fulvous or orange markings . . . . . 8

7. Dark grey, dull light fulvous posteriorly from middle of costa and in tornus . . . . . *cyanograpta* MEYRICK  
Dark fuscous, orange-fulvous posteriorly from  $\frac{1}{3}$  of costa and from middle of dorsum . . . . . *anamnestis* MEYRICK
8. Fore wing with one or more blue-leadен or leaden-metallic streaks . . . . . 9  
Fore wing without blue or leaden-metallic streaks . . . . . 13
9. Hind wing grey. . . . . *aeolomis* MEYRICK  
Hind wing fuscous . . . . . 10
10. Head dark bronze-fuscous, palpus whitish . . . . . 11  
Head and palpus both distinctly tinged ochreous. . . . . *fistularis* MEYRICK
11. Fore wing, basal half with strong greenish-blue iridescence . . . . .  
. . . . . *alternans* spec. nov.  
Fore wing without such iridescence . . . . . 12
12. Fore wing with basal half distinctly paler, this area well-defined, including a dark fuscous dentoid spot on  $\frac{1}{4}$  of dorsum . . . . . *pulverula* MEYRICK  
Not thus . . . . . *delineana* WALKER
13. Fore wing transversely strigulated with brown; hind wing blackish with a hyaline streak in disc . . . . . *seclusana* WALKER  
Not thus . . . . . 14
14. Fore wing with costa darker than remainder of wing . . . . . *ancyrota* MEYRICK  
Fore wing with costa paler than remainder of wing . . . . . 15
15. Fore wing brown with ocellus yellowish edged and streaked with black . . . . .  
. . . . . *subsimplana* PAGENSTECHER  
Fore wing grey, ocellus absent . . . . . *egregiana* FELDER

### **Enarmonia pulverula** (MEYRICK, 1912)

*Laspeyresia pulverula* MEYRICK, 1912, Journ. Bomb. Nat. Hist. Soc., vol. 21, p. 876.

Distribution: Ceylon, Assam, Borneo, Java, China.

Sigi Camp, 1500 m, February 26, 1939. One male.

### **Enarmonia alternans** spec. nov. (figs. 362, 365)

♂ 12 mm, ♀ 12–13 mm. Head dark fuscous, sides of vertex opalescent with whitish-bluish in certain lights, face white. Palpus white, extreme tip of median segment, and terminal segment, which is hardly exposed, dark grey. Antenna, thorax and abdomen dark fuscous, the latter in male black above. Legs rather pale grey, suffused with black above. Fore wing rounded-triangular, broad, costa curved, apex rounded, termen concave on vein 7, rounded below, vertical. Dark bronze-fuscous, anterior half strongly opalescent with whitish-green in certain lights. Costa from beyond base to apex suffused with black; five pairs of small white transverse marks from before  $\frac{1}{3}$  to before  $\frac{3}{4}$ ; first, third and fifth pair each giving rise to very oblique metallic-blue narrow streaks, tolerably parallel, running respectively to upper edge of cell, to rather above and beyond upper angle of cell, and almost to terminal edge below apex (to termination of vein 7); second and fourth pairs of transverse marks each with a minute metallic-blue dot just below costa; a faint short very oblique blackish streak on costa preceding first blue streak; second and third blue streaks

each preceded by a narrow black fascia; first of these fasciae from middle of costa to above upper angle of cell, slightly dilated, sending off a small zig-zag black strigula from its lower edge along closing vein, thence streak horizontal, halfway towards termen, narrowed; second black fascia narrowed, curved posteriorly, to before middle of termen; a pair of large transverse white marks on costa before apex, posterior mark twice as large as anterior, slightly inwardly curved; four rather ill-defined slightly sinuate bronze-fuscous narrow parallel streaks, paler than ground colour, forming together an inwardly oblique erect patch on middle of dorsum reaching halfway across wing to beyond middle of disc; ocellus erect-ovate slightly outwardly oblique, occupying somewhat more than middle third of wing breadth; fuscous, slightly paler than ground colour, with a series of five longitudinal black marks, which become longer and narrower below; ocellus also edged by two rather short transverse metallic-blue streaks, anterior streak broader, faint, posterior streak slightly curved, shining, narrowed below; paler fuscous colour extending below ocellus to tornus, its anterior edge well-defined, straight, vertical, to dorsum before tornus; a narrow sharp black marginal line: from last costal white mark running around apex, along termen and in tornus; this line interrupted in middle of wing by a minute glossy bluish-grey dot, sometimes this dot absent. Cilia dark fuscous, around apex and along upper two-thirds of termen shining pale metallic bluish-green. Hind wing blackish-fuscous, becoming pale fuscous above middle of disc anteriorly and at base; cubital pecten paler, fuscous-greyish; an elongate marginal patch of glossy whitish-greyish scales between veins 1a—1b; cilia glossy pale-fuscous, with a dark fuscous basal third.

Tegumen erect. Uncus triangular, with a short apical projection. Gnathos, if present, weak, membranous, not to be confused with the large anus. Valva elongate, constricted in middle, cucullus obliquely ovate, sacculus with long marginal bristles towards base. Aedoeagus slender, pistol-shaped. Cornuti a group of short spines (Slide No. 821, holotype, No. 822, paratype).

Ostium, a broad funnel, with orifice supported by an oval plate. Ductus bursae sclerotized throughout. Signa inequal, minutely denticulate, with large basal plates; larger socius long (Slide No. 858 D, allotype).

Sigi Camp, 1500 m, February 26, 1939 (holotype, male). February 17, 1939 (allotype, female). February 24, 1939. One male, two females. Nearest to *E. obnixa* (MEYRICK), from Java.

#### Sereda HEINRICH, 1926

*Sereda* HEINRICH, 1926 U. S. Nat. Mus. Bull. 132, pp. 6, 25, figs. 29, 118. FLETCHER, Mem. Agr. Ind., Ent., vol 11, p. 203, 1929.

This genus is characteristic by the absence of a cubital pecten and by the approximated veins 6 and 7 in hind wing. A single species from North America has been described so far.

*Sereda myodes* spec. nov.*μυοδής* = mouse-like

♂ 9 mm. Head, antenna, palpus, thorax fuscous-gray (Abdomen missing). Legs whitish-grey, speckled with fuscous, tarsi white-ringed. Fore wing rather broad, triangular-subovate, broadest at  $\frac{4}{5}$ , costa gently curved anteriorly, straight posteriorly, apex obtuse, termen gently sinuate above, rounded, little oblique beneath. Whitish-fuscous, densely suffused with fuscous; some nine pairs of small whitish costal marks; a metallic-blue streak from below  $\frac{3}{5}$  of costa to  $\frac{3}{4}$  of dorsum, with upper part outwardly oblique, median part vertical, outwardly convex, lower part straight, vertical; another similar streak before median third of termen, trifurcate at apex, branches ill-defined, each to one of the three ultimate pairs of costal markings; a metallic-blue dot above tornus; apex with three fine whitish transverse strigulae, ultimate strigula continued so as to form a marginal line along termen to above tornus; a small whitish bar below apex extending over cilia, a less distinct bar on  $\frac{3}{4}$  of termen. Cilia greyish-fuscous with a conspicuous black basal streak traversed by the above mentioned white bars. Hind wing dark fuscous. Cilia pale fuscous, basal third dark fuscous.

Sigi Camp, 1500 m, February 26, 1939. One specimen.



## ADDENDA AND CORRIGENDA TO PART I

*Isotenes epiperca* DIAKONOFF, 1944 (*Treubia*, vol. hors série, p. 42, pl. 14, fig. 4). We are satisfied that this species is conspecific with *Isotenes melancalymma* DIAKONOFF, 1952 (part I, pp. 97-99, figs. 94, 117, 118, 119), *syn. nov.*

*Isotenes pudens* DIAKONOFF, part I, p. 83 has better to be transferred to the end of the discussion of the species of that genus, as it is remote from other Papuan species recorded in part I, and belongs to the *I. miserana* group of species.

*Thrinophora ochracea* DIAKONOFF, 1941 (*Treubia*, vol. hors série, p. 44, pl. 17, fig. 10) has been omitted from the key to the species of this genus in part I, p. 149. It can readily be discriminated from all other Papuan species by its tawny colouring.

Indications of the sex of the following holotypes have to be added:

*Zacorisca bovisanguis* DIAKONOFF, p. 51, holotype, male,

*Chionothrenna obscura* DIAKONOFF, p. 59, holotype, male,

*Chionothrenna ochricauda* DIAKONOFF, p. 60, holotype, male,

*Chionothrenna ocellata* DIAKONOFF, p. 64, holotype, male,

*Chionothrenna placida* DIAKONOFF, p. 66, holotype, male.

It may be specified, that the genitalia slide of *Chionothrenna mesoxantha* DIAKONOFF, p. 54, figs. 44 and 50, is of the holotype.

The following corrections must be made:

p. 26, line 7 from bottom, read "Cornuti" instead of "Socii".

p. 29, lines 3 and 4 from top, read "the signa, ...one signum, ...two signa" instead of "the socii, ...one socius, ...two socii".

p. 49, line 14 from bottom, read: "p. 36, pl. 14, figs. 1-2" instead of "p. 39".

p. 56, lines 12 and 11 from bottom, read: "p. 40, pl. 15, fig. 7" instead of "p. 36, pl. 14, figs. 1-2".

During and after the publication of part I of this paper descriptions of the following additional genera and species of Tortricinae from New Guinea have been published in the *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen*, Amsterdam, ser. C, vol. 55, 1952:

*Zacorisca angi* DIAKONOFF, 383-384, fig. 1, ♀, Arfak Mountains.

*Isotenes croblyota* (MEYRICK, 1910), pp. 394-395, fig. 5, neallotype, ♀, Cyclops Mountains.

*Isotenes ornata* DIAKONOFF, p. 395-397, fig. 1, ♂, Papua, Mount Tafa.

*Isotenes punctosa* DIAKONOFF, pp. 397-398, fig. 3, ♂, Papua, Mount Tafa.

*Isotenes clarisecta* DIAKONOFF, p. 399, fig. 2, ♂, Arfak Mountains.

*Isotenes tetrops* (DIAKONOFF, 1944), p. 400, fig. 4, ♀, neallotype, Wissel Lakes.

*Thrinophora deloptycha* DIAKONOFF, pp. 401-403, fig. 8, ♂, Arfak Mountains.

*Thrinophora microtera* DIAKONOFF, pp. 403-404, fig. 7, ♂, Arfak Mountains.

*Choanograptis concinna* DIAKONOFF, pp. 644-645, fig. 2, ♂, Owgarra.

*Choanograptis fasciata* DIAKONOFF, pp. 645-647, fig. 4, ♀, Vogelkop Peninsula.

*Choanograptis concurrens* DIAKONOFF, pp. 647-648, fig. 1, ♀, Wissel Lakes.

*Choanograptis ambigua* DIAKONOFF, pp. 648-649, fig. 3, ♂, Cyclops Mountains.

*Paradichelia* DIAKONOFF, pp. 384-385, fig. 5, with type *P. rostrata* DIAKONOFF, ♂, ♀, key to the species. *Tortrix cocnographa* Meyrick, 1938, and *Cnephasia basipuncta* DIAKONOFF, 1941, referred to this genus.

*Paradichelia rostrata* DIAKONOFF, pp. 387-388, figs. 4, 5, 7, ♂, ♀, Arfak Mountains.

*Paradichelia brongersmai* DIAKONOFF, pp. 389-390, fig. 3, ♂, Biak Island.

*Paradichelia euryptycha* DIAKONOFF, pp. 390-391, fig. 2, ♂, Rumphius Range.

*Macrothyma* DIAKONOFF, p. 392, fig. 6, with type *Adoxophyes sanguinolenta* DIAKONOFF, 1941, ♂, ♀.

*Macrothyma sanguinolenta* (DIAKONOFF, 1941), pp. 392-393, fig. 8, ♀, neallotype, Waigeu Island.

*Taeniarchis phaedra* DIAKONOFF, pp. 649-650, fig. 5, ♂, Vogelkop Peninsula.

*Dicellitis cornucopiae* DIAKONOFF, pp. 405-406, fig. 6, ♀, neallotype, Vogelkop Peninsula.

*Polemograptis chrysodesma* DIAKONOFF, pp. 651-652, figs. 6, 7, ♂, ♀, Vogelkop Peninsula.

*Argyrotoza hermiophora* DIAKONOFF, pp. 653-654, fig. 8, ♂, Waigeu Island.

*Tymbarcha hemiprasina* DIAKONOFF, pp. 654-655, fig. 9, ♀, Waigeu Island.

***Paradichelia verecunda* (DIAKONOFF, 1952) combin. nov.**

*Parachorista verecunda* DIAKONOFF, Part 1, p. 132, fig. 189 (♂).

We are satisfied that the species described in part I, p. 132, fig. 189, has to be transferred to the genus *Paradichelia* DIAKONOFF, 1952, cited above.



